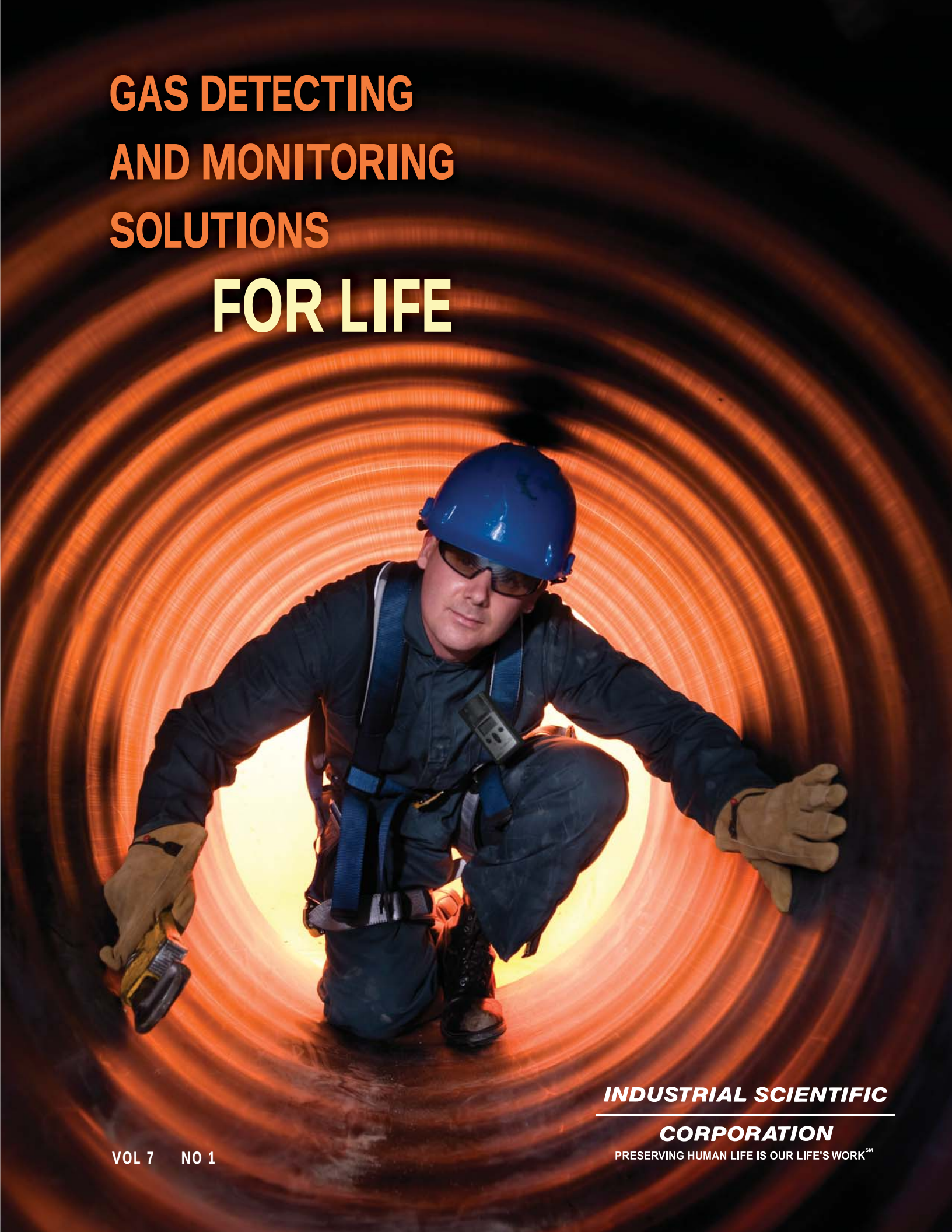
GAS DETECTING AND MONITORING SOLUTIONS FOR LIFE



VOL 7 NO 1

INDUSTRIAL SCIENTIFIC CORPORATION

PRESERVING HUMAN LIFE IS OUR LIFE'S WORK℠

INDUSTRIAL SCIENTIFIC

OUR MISSION

Preserving human life on, above and below the earth

Delivering highest quality, best customer service . . . every transaction, every time

To Our Valued Customers,

Industrial Scientific is 100% committed to fulfilling the promises we make to you in our mission statement. Redefined in 2008 for undisputed clarity, our mission promises highest quality and best customer service…every transaction, every time.

The products we manufacture and the services we provide are life critical. We have created an environment within Industrial Scientific that is dominated by the responsibilities we have to the lives of the men and women who use our products. We never forget that a human life depends on every product and every action of our people.

Industrial Scientific is fortunate to have so many humble, hungry, smart people around the world. We are united by our commitment to do whatever it takes to preserve human life. I have confidence you will be delighted with our people as they serve you. Serving others is our greatest joy.

Our management philosophy supports our people as they serve you. We believe that good financial performance is the result of doing the right things for our employees first, customers second and shareholders third. I think it's a truism that great people working with great tools create better products and services. That's our way of putting you first.

My personal pledge to you is that every Industrial Scientific person will serve you the way we like to be served…with competence, care, enthusiasm, and concern for your costs. If we fail to meet your expectations in any way, please contact me at 1-412-490-1890 or e-mail at kentm@indsci.com.

Thank you for reviewing our catalogue. We look forward to serving you.

Sincerely yours,

Kent McElhattan
Chairman and CEO

Why Industrial Scientific?

Quality Assurance
- ISO9001-2000 Quality System Certified
- CSA – Category Certified
- Third Party Certifications – for intrinsic safety, susceptibility to electromagnetic and radio frequency interference, ingress protection and performance

Global Presence
- Manufacturing facilities in USA, France and China
- Offices in many countries throughout the world
- Distribution network established worldwide
- Established international accounts – references available

Guaranteed For Life
- Lifetime Warranty on most portable monitors
- Service Guarantee on all factory repairs
- One year warranty on all fixed-point systems and accessories

Ease of Use and Serviceability
- One-button operation and calibration on most monitors
- Microprocessor-controlled operation
- Easy sensor replacement and calibration in the field
- Local servicing available through authorized distributors

Environmentally Friendly
- Complete recycling process for returned and decommissioned instruments
- Recycling program for sensors, PC boards and batteries
- Compliant with WEEE and RoHS

Durability and Reliability
- Durable stainless steel or high impact composite construction on portable monitors
- NEMA 4X fiberglass, cast aluminum or stainless steel construction on fixed monitoring systems
- Superior Radio Frequency Interference (RFI) and Electromagnetic Interference (EMI) shielding

State-of-the-Art Product Testing Laboratory
- Tests simulate harsh industrial environments for product design verification
- Rigorous testing for RFI, EMI, water and dust ingress, vibration and drop effects, temperature and humidity
- Ensures product reliability and durability
- 1,800 sq. ft. in-house lab is unique to the industry

Flexible Programs
- On-site product demonstrations
- Training courses available at corporate headquarters or customer's site
- Interactive computer-based and Web-based training
- Variety of options for purchase and after sale service

ISO9001:2000 CERTIFIED

GUARANTEED. FOR LIFE.

iNet Instrument Network™

Imagine a workplace that is safer, more productive and more cost-effective. The iNet Instrument Network™ gives you better visibility into the effectiveness of your gas monitoring program by combining patented technology, automation and industry best practices.

WHAT iNET™ DOES

- Performs instrument bump tests, calibrations and data downloads
- Analyzes instrument data
- Identifies service requirements
- Generates scheduled reports
- Sends immediate alerts
- Initiates repairs or replacement services.

WHAT iNET™ DOES FOR YOU

Ensures Equipment Reliability
With automated maintenance, all of your gas detectors will be in top working condition. The result is a safer workplace and increased compliance.

Increases Compliance, Reduces Risk
Electronic and paper records prove compliance to external auditors. Custom alerts and reports can also measure internal compliance to your own standards.

Increases Productivity
Automating time-consuming maintenance tasks increases productivity, allowing more resources to be focused toward your company's core business.

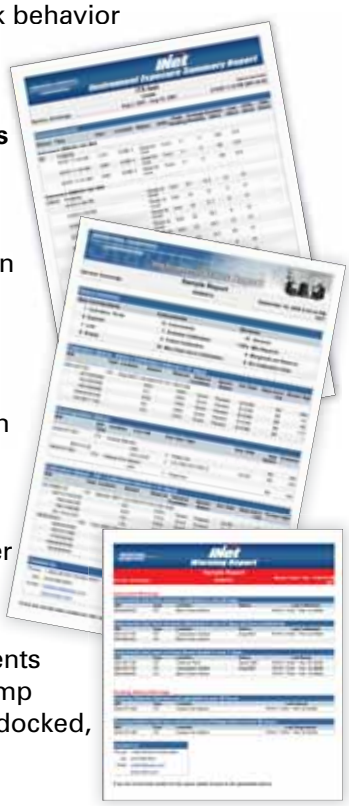
Controls Costs, Optimizes Fleet Size
In addition to controlling labor costs, iNet™ virtually eliminates instrument downtime. With a fleet of well-maintained and reliable equipment, you won't have to buy and maintain a stock of replacements. And because iNet™ is all-inclusive, excess purchasing, shipping and inventory costs can also be eliminated.

HOW iNET™ WORKS

iNET™ REPORTS ENSURE A SAFER WORKPLACE

iNet's™ data collection, analysis and reports can highlight areas of potential trouble. By providing leading indicators, iNet™ empowers you to address unsafe conditions or at-risk behavior before problems happen.

REPORT TYPES



Instrument Status Reports
A weekly e-mail report shows a summary that includes:

- Days since last calibration
- Overdue calibrations
- Sensors with marginal span reserves
- Age of sensors
- Calibration gas expiration
- Calibration/bump test status
- Continuous monitoring of calibration gas cylinder pressure.

Warning Reports
Show if any scheduled events were missed (units not bump tested, not calibrated, not docked, etc.).

Summary Reports
Display gas alarm events – by unit, user, site, gas type, date, time, duration, concentration, etc.

Alerts
Sent immediately when there is an alarm incident, failed calibration, failed oxygen bump test, or expired or empty calibration gas.

iNET™ PRICING

A 48-month agreement locks in your pricing with no additional or hidden costs. There's no guesswork involved. Your gas detection budget will be simple and predictable. Should your needs change, you can always update the agreement by adding instruments to your fleet.

HASSLE-FREE EQUIPMENT UPGRADES

iNet™ makes it easy to take advantage of the latest gas detection technology. When renewing your iNet™ agreement, you can either upgrade your fleet with newer instruments or with the existing equipment.

AN ALL-INCLUSIVE PROGRAM

Equipment

- Instruments
- Accessories
- DS2 Docking Stations™
- Server and software
- Calibration gas replenishment
- All repair parts, labor* and freight

*Not applicable for iNet Parts™ Program

Continuous Monitoring
Industrial Scientific continuously checks your instrument fleet via the Internet.

Setup Services

- Installation and setup of Docking Stations™, server and instruments
- System testing
- Training
- Travel expenses

Data Services

- Asset tracking by serial number
- Secure, off-site data storage
- Data analysis
- E-mail reports and alerts

iNET™ SERVICE OPTIONS

Choose from one of three service options:

iNet Exchange™ Program

If a malfunction is detected, a ready-to-use replacement instrument is automatically shipped within 24 hours (next business day). Customer returns instrument in need of repair back to Industrial Scientific in a pre-paid shipping package.

The iNet Exchange™ Program is not applicable for fixed-point gas monitoring systems.

iNet Parts™ Program

The iNet Parts™ Program is ideal for customers that prefer to do their own equipment maintenance and repair. If a malfunction is detected, all necessary components are automatically shipped within 24 hours (next business day).

iNet On-Site™ Program

Regular visits with an authorized Industrial Scientific service technician can be scheduled or automatically initiated in response to service requirements.

The iNet On-Site™ Program is available in selected areas only.

LOOK FOR THIS SYMBOL ON ALL COMPATIBLE INSTRUMENT PAGES

Lifetime Warranty Program

Industrial Scientific designs and manufactures the highest quality instruments for the preservation of life and property. Our warranty statement GUARANTEED FOR LIFE is not just an empty promise; if anything fails on any of our portable gas monitoring instruments, we pledge to promptly replace or repair it – at no charge to you.

This warranty lasts for the life of the instrument and applies to almost all of our portable gas monitors.* Every component is covered, except for routine consumable items (sensors, battery packs, pump and filters), which come with a one-year warranty. (Of course, physical damage or abuse such as crushing or drowning the instrument is not covered.) Accessories, such as sampling pumps, probes and chargers also come with a one-year warranty.

Instruments manufactured since January 1996 are considered under warranty. Even if you sell your instrument, the warranty automatically transfers to the new owner.

In the event of a failed instrument: simply send the instrument to us and we will repair and return it within 10 days in excellent working order. Please visit our Web site for the nearest service center location.

**See product pages for Lifetime Warranty indication.*

Purchase Options and After Sale Service Options

Industrial Scientific offers many exciting alternatives to purchasing products in a traditional sense. These programs, available through all Industrial Scientific authorized distributors, include:

Rental/Hire – For short term gas detection needs, equipment can be rented by the week or by the month.

Purchase – Our products are available for purchase through our worldwide network of distributors. To find a local distributor, contact the closest regional office or visit our Distributor Locator online at ***www.indsci.com***.

Certified Pre-Owned – Industrial Scientific's Certified Pre-Owned Program delivers factory reconditioned instruments to you at discounts of up to 30% off of the list price. Instruments are shipped with new sensors, battery packs and a full warranty.

Users of Industrial Scientific equipment also have many service programs available to them to simplify their lives and save them money.

Start-Up & Commissioning Service – Our Start-Up & Commissioning Service Technicians can ensure the proper installation of your Docking Station™ or fixed system.

Factory Repair Service – Industrial Scientific's factory Service Centers offer fast turnaround and ensure that your instruments are repaired exactly to specification. Only factory original parts are used to ensure the instrument's intrinsic safety is never compromised.

Mobile Service (where available) – Industrial Scientific's Mobile Service Technicians can perform all levels of service, from calibration to repairs, on site at any facility within their service area.

Extended Warranty Program – The Extended Warranty Program is designed to secure your cost of ownership for instruments with limited warranties (non-Guaranteed For Life equipment). This additional coverage extends the warranty to a full four years and must be purchased within the first six months of instrument ownership.

For information on all of these programs, e-mail us at info@indsci.com or contact your local representative.

Table of Contents

Portable Instrument Sensor Options

	Multi-Gas Monitors					Single-Gas Monitors	
Gas	**MX6 iBrid™**	**MX4 iQuad™**	**iTX**	**BM25**	**M40**	**GasBadge® Pro**	**GasBadge® Plus**
Oxygen (O_2)	■	■	■	■	■	■	■
LEL Sensor - Catalytic Bead	■	■	■	■	■		
	and up to three of the following	and up to two of the following	and up to three of the following	and up to two of the following		or any one of the following	or any one of the following
Ammonia (NH_3)	■		■	■		■	
Arsine (ASH_3)				■			
Carbon Dioxide (CO_2) - Infrared (IR)	■			■			
Carbon Monoxide (CO)	■	■	■	■	■	■	■
Chlorine (Cl_2)	■		■	■		■	
Chlorine Dioxide (ClO_2)	■		■			■	
Ethylene Oxide (ETO)				■			
Hydrocarbons (0-100% LEL) - Infrared (IR)	■		■	■		■	
Hydrogen (H_2)	■		■	■		■	
Hydrogen Chloride (HCl)	■		■	■			
Hydrogen Cyanide (HCN)	■		■	■		■	
Hydrogen Sulfide (H_2S)	■	■	■	■	■	■	■
LEL Sensor (Methane 0-5% Vol) - Catalytic Bead	■	■					
Methane (0-100% Vol) - Infrared (IR)	■						
Nitric Oxide (NO)	■		■	■			
Nitrogen Dioxide (NO_2)	■	■	■	■		■	■
Phosphine (PH_3)	■		■	■		■	
Silane (SiH_4)				■			
Sulfur Dioxide (SO_2)	■	■	■	■		■	■
VOCs (with PID)	■						
Approvals (Independently Classified Intrinsically Safe)							
UL	■	■	■		■	■	■
MSHA	■	■	■		■		■
CSA	■	■	■	■	■	■	■
AUSTRALIA	■	■	■		■	■	■
ATEX	■	■	■	■	■	■	■
GOST (Russia)			■		■	■	■
INMETRO	■	■		■	■	■	■

Certain limits apply to the number of sensor configurations. Call for details.

Portable gas monitors from Industrial Scientific Corporation are designed with a single goal in mind: Preserve human life. Each and every day, workers depend on our portable gas instruments to warn them of harmful gas conditions. To protect them from unseen dangers. To help keep them safe.

Whether for a single gas application, or a confined space environment requiring multi-gas monitoring, Industrial Scientific instruments are designed and manufactured to deliver peak performance and durability. Guaranteed.

DS2 Docking Station™

- Automates instrument calibration, record keeping, diagnostics and recharging
- Stand-alone Instrument Docking Stations (IDS)
- Link up to 100 IDSs
- Dock hundreds of instruments
- Multilingual display
- One centralized database

Look for DS2 Docking Station™ Symbol on Compatible Instrument Pages

US Patent #6,442,639

International Patent #WO0182063

SPECIFICATIONS

COMPATIBLE GAS MONITORS SUPPORTED:
MX6 all versions, **iTX** Ver 2.2 or higher, **GasBadge® Pro** all versions, **GasBadge® Plus** all versions

CASE:
Impact-resistant composite with radio frequency interference (RFI) protection

DIMENSIONS:
24.8 cm x 16.3 cm x 22.9 cm (9.75" x 6.4" x 9")

INPUT:
115/230 VAC, 50/60 Hz. 12 VDC

OPERATING TEMPERATURE:
0°C to 50°C (32°F to 122°F)

COMMUNICATION:
10bT Ethernet support, RJ-45 Category 5 connection

DISPLAY:
128 x 64 Dot Matrix LCD – Multilingual modes allow selections in English, Spanish, French and German languages

PUMP FLOW RATE:
500 ml/minute @ 80" H_2O

GAS INPUTS:
3 separate inputs on each IDS. Ability to share up to 14 discrete gases for calibration when IDSs are clustered together.

DS2 COMPUTER REQUIREMENTS (MINIMUM RECOMMENDED):
For 1-8 IDS units: Dedicated Pentium III, 800 MHz, 256 MB RAM, 4GB available disk space, Windows® 2000 Professional, Windows® XP Professional operating system, one Cat5E Ethernet network adapter, fixed IP address
For 9-100 IDS units: Dedicated Pentium III, 800 MHz, 256 MB RAM, 4GB available disk space, Windows® 2000 Standard Server, Windows® 2003 Server operating system, one Cat5E Ethernet network adapter, fixed IP address

The DS2 Docking Station™ provides the ultimate flexibility for managing your gas monitors wherever you use them. The DS2 gives you all of the benefits of consistent automated calibration, record keeping, battery recharging and instrument diagnostics for your monitors to limit your liabilities and safety hazards. Ethernet connectivity enables you to link up to 100 stand-alone Instrument Docking Stations (IDSs) from anywhere in your facility and relay the data back to one central database for total instrument management. A graphical user interface tool (DSSAC) allows an administrator to view operations on each Docking Station from a network computer, making it easy to track instruments, print reports, set events and change parameters for any location.

Each IDS features a multilingual display, three status LEDs, a keypad and an audible alarm to provide important instrument details at a single glance. The DS2 also offers optional iGas® capability to automatically identify calibration gas cylinder concentrations, lot numbers, and expiration dates on the system.

Whether you manage one gas monitor or an entire fleet, the DS2 provides superior cost-savings and flexibility.

SUPPLIED WITH DS2 DOCKING STATION™

Each DS2 Instrument Docking Station is shipped with DSS software, 2 DSSAC licenses, Docking Station configurator, power cord, installation guide and operating manual.

ORDERING INFORMATION

PART #	DESCRIPTION	
18106724-ABC	DS2 Instrument Docking Station (IDS) for MX6 iBrid™	
18105551-ABC	DS2 Instrument Docking Station (IDS) for iTX	
18106302-ABC	DS2 Instrument Docking Station (IDS) for GasBadge® Pro	
18107698-ABC	DS2 Instrument Docking Station (IDS) for GasBadge® Plus	
	A - Wireless Option (currently unavailable)	0 - none
	B - iGas Reader (number included)	0 - none 1 2 3
	C - Power Cord Option 0 - US 1 - UK 2 - EU 3 - AUS 4 - ITA 5 - DEN 6 - SWZ	
18106543-5	MX6 iBrid™/DS2 Laptop Turnkey System+	
18106543-1	iTX/DS2 Laptop Turnkey System+	
18106543-4	GasBadge® Pro/DS2 Laptop Turnkey System+	
17113978	DS2 PC with Windows® Server OS++	

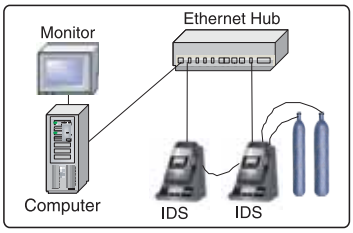
+ *Includes (1) DS2, Computer (installed software: Windows® XP Professional, DSS and DSSAC), monitor, keyboard, mouse, 5-port Ethernet hub and cables.*

++ *Includes keyboard and mouse. Monitor not included. DS2 not included.*

OPTIONAL ACCESSORIES

PART #	DESCRIPTION
18105684	iGas® Reader
17113630	UPS, 700VA, 450W
18105841	Demand Flow Regulator w/iGas Pressure Switch (for 58L, 103L and 34L aluminum cylinders)
18105866	Demand Flow Regulator, 600 CGA w/iGas Pressure Switch (for 34L steel cylinders)
18105833	Demand Flow Regulator, 590 CGA w/iGas Pressure Switch (for 552L cylinders)
18105858	Demand Flow Regulator, 330 CGA w/iGas Pressure Switch (for 650L cylinders)
18102509	Demand Flow Regulator, 5/8 UNF (for 58L, 103L and 34L aluminum cylinders)
18103564	Demand Flow Regulator, 600 CGA (for 34L steel cylinders)
18103549	Demand Flow Regulator, 590 CGA (for 552L cylinders)
18103556	Demand Flow Regulator, 330 CGA (for 650L cylinders)
18105924	5-Port Gas Regulator Manifold
18105932	6-Port Gas Regulator Manifold

SMALL INSTALLATION SCENARIO

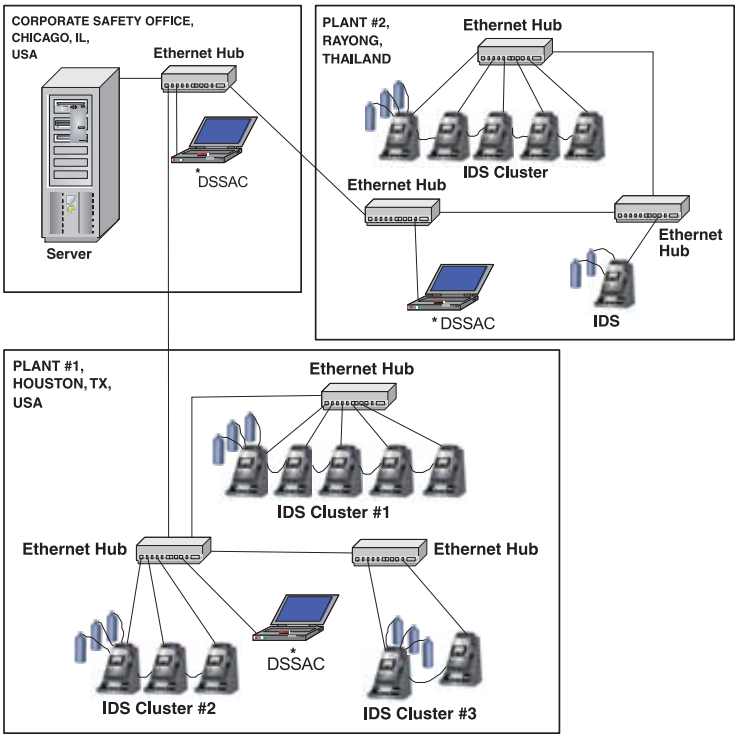


SINGLE-LOCATION COMPANY

Illustrates one DS2 installation on a stand-alone Ethernet, with 2 IDSs in a cluster sharing 2 cylinders of calibration gas.

Instrument data is available at the local level.

LARGE INSTALLATION SCENARIO



MULTI-LOCATION COMPANY

Illustrates multiple IDS cluster installations at multiple sites all tied together on a common company Ethernet, sharing a common database. Each cluster of IDSs share calibration gas.

Instrument data can be accessed at the plant level as well as by the corporate safety office.

OPTIONAL ACCESSORIES (Continued)

PART #	DESCRIPTION
17113929	4-Port Ethernet Router DSL
17113887	Ethernet Cable, 5' (Cat5E network cable)
17113895	Ethernet Cable, 10' (Cat5E network cable)
17113903	Ethernet Cable, 25' (Cat5E network cable)
17113911	Ethernet Crossover Cable, 5' (Cat5E network cable)
17113945	5-Port Ethernet Hub
17113952	16-Port Ethernet Hub
17113960	24-Port Ethernet Hub

MX6 iBrid™ Multi-Gas Monitor

- 24 sensor options including PID and IR
- Diffusion mode or internal sampling pump versions
- Simple, user-friendly, menu-driven navigation
- Up to 6 gases monitored simultaneously
- Full-color graphic LCD is highly visible in a variety of lighting conditions

Internal sampling pump version

SPECIFICATIONS

CASE:
Lexan/ABS/Stainless Steel w/protective rubber overmold

DIMENSIONS:
13.5 cm x 7.7 cm x 4.3 cm (5.3" x 3.05" x 1.7") – diffusion version

WEIGHT:
409 g (14.4 oz)

DISPLAY/READOUT:
STN Color Graphic LCD

SENSORS:
Combustible Gas/Methane – Catalytic Diffusion/Infrared
Oxygen and Toxic Gases – Electrochemical
CO_2 – Infrared
VOCs – 10.6 eV Photolonization

MEASURING RANGES:
Combustible Gases – 0 to 100% LEL
in 1% or 10 ppm increments – Catalytic
(0 to 100% LEL in 1% increments optional – Infrared)
Methane – 0 to 5% of volume in 0.1% increments – Catalytic
(0 to 100% of volume in 1% increments optional – Infrared)
Oxygen – 0 to 30% of volume in 0.1% increments
Carbon Monoxide – 0 to 1,000 ppm in 1 ppm increments
(0 to 9,999 ppm in 1 ppm increments optional)
Hydrogen Sulfide – 0 to 500 ppm in 0.1 ppm increments
CO/H_2S – Carbon Monoxide – 0 to 500 ppm in 1 ppm increments
– Hydrogen Sulfide – 0 to 200 ppm in 0.1 ppm increments
Hydrogen, Nitric Oxide – 0 to 1,000 ppm in 1 ppm increments
Chlorine – 0 to 100 ppm in 0.1 ppm increments
Nitrogen Dioxide, Sulfur Dioxide
– 0 to 100 ppm in 0.1 ppm increments
Hydrogen Cyanide, Hydrogen Chloride
– 0 to 30 ppm in 0.1 ppm increments
Ammonia – 0 to 100 ppm in 1 ppm increments
Chlorine Dioxide – 0 to 1 ppm in 0.01 ppm increments
Phosphine – 0 to 5 ppm in 0.01 ppm increments
(0 to 1,000 ppm in 1 ppm increments optional)
Carbon Dioxide – 0 to 5% of volume in 0.01% increments
VOCs (general) – 0 to 2,000 ppm in 0.1 increments

POWER SOURCE (RUN TIMES):
Rechargeable Lithium-ion (Li-ion) Battery Pack (24 hours typical)
Rechargeable, Extended-Range Lithium-ion (Li-ion) Battery Pack
(36 hours typical)
Replaceable AA Alkaline Battery Pack (10.5 hours typical)

TEMPERATURE RANGE:
-20°C to 55°C (-4°F to 131°F) typical

HUMIDITY RANGE:
15% to 95% non-condensing (continuous) typical

The MX6 iBrid™ is the world's first gas monitor to feature a full-color LCD display screen. The display improves safety with clear readings in low-light, bright-light or anywhere in-between.

Whether the work is outside, inside or underground, it's easy to see hazardous levels of oxygen, toxic and combustible gas, and volatile organic compounds (VOCs) in the immediate work environment.

A color display also allows the user to step through instrument settings and functions with an intuitive menu and the instrument's five-way navigation button. It even supports on-board graphing for easily interpreting real-time readings and recorded data in the field.

The MX6 can be customized to specific applications with the choice of 24 sensor options, multiple languages, and diffusion mode or internal sampling pump operation.

Built and tested to withstand the harshest work environments, the MX6 carries a lifetime warranty.

Maintaining your fleet can be automated with our DS2 Docking Station™, and managing your fleet can be outsourced with our iNet™ Instrument Network.

APPROVALS

UL – Class I, Groups A,B,C,D T4; Class II, Groups F,G; AEx ia d IIC T4
CSA – Class I, Groups A,B,C,D T4; Ex d ia IIC T4
MSHA – CFR30, Part 18 and 22, Intrinsically safe for methane/air mixtures
IECEx/ATEX – EEx ia d I/IIC; IP65 (IP64 pump version)
Equipment Group and Category: II 2G / I M1 (I M2 w/IR sensor)

SUPPLIED WITH MONITOR

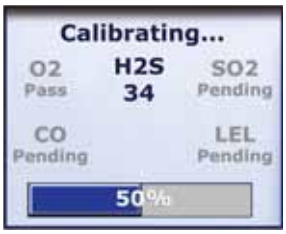
Universal charger, nylon carrying case, belt clip, calibration cup, wrist strap, maintenance tool, manual, quick start guide, calibration tubing, dust filter/water stop (pump versions), calibration fitting (pump versions), sample tubing (pump versions).

THE MX6 iBRID™ COLOR DISPLAY

Enhanced Visibility
Expanded Functionality

An intuitive menu provides easy access to features.

View datalog trends and direct readings graphically.



Calibration progress and results shown for each sensor.

ORDERING INFORMATION

MX6-ABCDEFGH	A-E (Available Sensors)*			F	G	H
	CO	H_2S	O_2	1 - Li-ion	0 - Diffusion	1 - English
	NO_2	SO_2	NH_3	2 - Li-ion/Ext. Range	1 - Pump	2 - French
	Cl_2	ClO_2	PH_3	3 - Alkaline		3 - Spanish
	HCl	HCN	H_2	4 - Li-ion MSHA/AUS		4 - German
	NO	PH_3/High	PID	5 - Li-ion/Ext. Range MSHA/AUS		5 - Italian
	CO/H_2 low interference	CO/High	CO/H_2S	6 - Alkaline MSHA/AUS		6 - Dutch
	Hydrocarbons IR (0-100% LEL)	LEL (Pentane)	LEL (Methane)			7 - Portuguese
	CO_2 (IR)	CH_4 IR (0-100% vol.)	CH_4 (0-5%)			8 - Indonesian

Note: There are millions of possible MX6 configurations. If your specific needs aren't among the common configurations below, use our custom instrument builder at **www.indsci.com/MX6builder.aspx to select the best configuration for your gas detection needs.*

MOST COMMON INSTRUMENT CONFIGURATIONS

PART #	DESCRIPTION
MX6-K1230101	MX6 - LEL, CO, H_2S, O_2, Li-ion
MX6-K0230101	MX6 - LEL, H_2S, O_2, Li-ion
MX6-K1030101	MX6 - LEL, CO, O_2, Li-ion
MX6-K0030101	MX6 - LEL, O_2, Li-ion
MX6-K123R211	MX6 - LEL, CO, H_2S, O_2, PID, Ext. Li-ion, Pump
MX6-K1235101	MX6 - LEL, CO, H_2S, O_2, SO_2, Li-ion
MX6-K0235101	MX6 - LEL, H_2S, O_2, SO_2, Li-ion
MX6-0000R211	MX6 - PID, Ext. Li-ion, Pump
MX6KIT-K1230211	MX6 Confined Space Kit - 4-gas w/Pump
MX6KIT-K123R211	MX6 Confined Space Kit - 4-gas/PID w/Pump
MX6KIT-0000R211	MX6 Kit - PID, Ext. Li-ion, Pump
MX6KITB0000R211	MX6 Kit - PID, Ext. Li-ion, Pump, w/Benzene Kit

COMMON INDUSTRY CONFIGURATIONS

PART #	DESCRIPTION
MX6-KJ53R211	MX6 LEL, CO/H_2S, O_2, SO_2, PID, Ext. Li-ion, Pump Petroleum Refining
MX6-K103Q211	MX6 LEL, CO, O_2, CO_2, Ext. Li-ion, Pump Brewing/Bottling/Wineries
MX6-KJ835101	MX6 LEL, CO/H_2S, O_2, SO_2, ClO_2, Li-ion Pulp/Paper
MX6-K673R211	MX6 LEL, O_2, NH_3, Cl_2, PID, Ext. Li-ion, Pump HazMat
MX6-M1030401	MX6 CH_4 (%), CO, O_2, Li-ion (MSHA/AUS) Mining
MX6-M1D34401	MX6 CH_4 (%), CO, O_2, NO_2, NO, Li-ion Ext. (MSHA/AUS) Mining (Diesel Applications)

OPTIONAL ACCESSORIES

PART #	DESCRIPTION
18106724-ABC+	DS2 Docking Station™ for MX6
18106765	SP6 Motorized Sampling Pump Module
18107078	MX6 Constant Flow Hand Aspirated Pump
18107086	MX6 Datalink Assembly – Software included
18106971	MX6 Replacement Battery Charger
18107094	MX6 Battery Charger/Datalink, Universal
18107011	MX6 Battery Charger, 12V
18107136	MX6 Battery Charger, 5-Unit
18107243	MX6 Truck-Mount Charger, 12V
18107250	MX6 Truck-Mount Charger, (hard-wired)
17131038-1	Rechargeable Li-ion Battery Pack, UL/CSA/ATEX
17131038-2	Rechargeable Li-ion Ext. Battery Pack, UL/CSA/ATEX
17131038-4	Rechargeable Li-ion Battery Pack, MSHA/AUS
17131038-5	Rechargeable Li-ion Ext. Battery Pack, MSHA/AUS
17131046-3	Alkaline Battery Pack, UL/CSA/ATEX
17131046-6	Alkaline Battery Pack, MSHA/AUS
18106856-0	Hard Leather Carrying Case, Diffusion
18106856-1	Hard Leather Case, Diffusion (no display window)
18106880-0	Hard Leather Carrying Case, Aspirated
18106880-1	Hard Leather Case, Aspirated (no display window)
18106831	Nylon Carrying Case, MX6 (supplied w/MX6 diffusion)
18106864	Nylon Carrying Case, MX6/SP6 (supplied w/MX6 aspirated)

+ DS2 Docking Station Ordering Information

A - Wireless Option (currently unavailable) 0 = none

B - iGas Reader (number included)
0 = No iGas Readers
1 = 1 iGas Reader
2 = 2 iGas Readers
3 = 3 iGas Readers

C - Power Cord Option
0 - US; 1 - UK; 2- EU; 3 - AUS; 4 - ITA; 5 - DEN; 6 - SWZ

MX4 iQuad™ Multi-Gas Monitor

- Monitors O_2, combustible gas, and 2 toxic gases including CO, H_2S, SO_2 or NO_2
- Ultra-bright LED alarms
- Powerful 95 dB audible alarm
- Small size, weighs only only 180 grams (6.4 ounces)
- Real-time readout
- Large LCD display
- Lithium-ion or alkaline battery operation

SPECIFICATIONS

CASE MATERIAL:
Polycarbonate w/ protective rubber overmold

DIMENSIONS:
103 mm x 58 mm x 30 mm (4.1" x 2.3" x 1.2")
with Li-ion Battery Pack

WEIGHT:
Lithium-ion Battery version = 180 g (6.4 oz)
Alkaline Battery version = 193 g (6.8 oz)

OPERATING TEMPERATURE RANGE:
-20°C to 50°C (-4°F to 122°F) typical

OPERATING HUMIDITY RANGE:
15%-95% non-condensing (continuous) typical

DISPLAY/READOUT:
Backlit Liquid Crystal Display (LCD)

POWER SOURCE/RUN TIME:
Li-ion – 12 hours typical @ 20°C
Alkaline AAA – 8 hours typical @ 20°C

ALARMS:
Ultra-bright LEDs, loud audible alarm (95 dB at 30 cm), and vibrating alarm

SENSORS:
Combustible gases/methane – Catalytic Diffusion
O_2, CO, H_2S, NO_2 – Electrochemical

MEASURING RANGES:
Combustible Gases: 0-100% LEL in 1% increments
Methane (CH_4):0-5% of vol. in 0.01% increments
Oxygen (O_2): 0-30% vol. in 0.1% increments
Carbon Monoxide (CO): 0-1,000 ppm in 1 ppm increments
Hydrogen Sulfide (H_2S): 0-500 ppm in 0.1 ppm increments
Nitrogen Dioxide (NO_2): 0-150 ppm in 0.1 ppm increments
Sulfur Dioxide (SO_2): 0-150 ppm in 0.1 ppm increments

APPROVALS

UL – Class I, Division 1, Groups A,B,C,D, T4; Class II, Groups F,G (Carbonaceous & Grain Dust); AEx d ia IIC T4; IP66; IP67
ATEX – Ex d ia I/IIC T4;Equipment Groups and Category II 2G and I M2; IP66; IP67
IECEx – Ex d ia IIC T4; IP66; IP67
INMETRO – BR-Ex d ia IIC T4; IP66; IP67
CSA – Class I, Division 1, Groups A,B,C,D, T4; C22.2 No. 152 for %LEL reading only; Ex d ia IIC T4
MSHA

The MX4 iQuad is an ideal personal monitor – small, rugged and simple to use. It's tough with a high-impact polycarbonate housing and protective rubber overmold. The MX4 is also third-party certified IP66 and IP67. That means it is dust-tight to withstand the dirtiest environments. And, it is water resistant; passing both water jet and submersion tests.

To warn users in hazardous areas, the unit uses a combination of three alarms: ultra-bright LEDs; 95 dB audible alarm; and a powerful vibrating alarm.

Available accessories for the MX4 include DS2 Docking Station™, MX•Cal™ Calibration Station, single-unit charger and single-unit charger/datalink.

MX4 Charger

MX4 Charger/ Datalink

MX4 DS2 Docking Station shown with MX4 Monitor

SUPPLIED WITH MONITOR

The MX4 comes standard with a charger, belt clip and calibration cup with tubing.

ORDERING INFORMATION

BASE UNIT +	SENSORS XXXX +				BATTERY +	LANGUAGE
MX4-XXXXXX	X	X	X	X	X	X
	0 - none	0 - none	0 - none	0 - none	1 - Li-ion UL/CSA	1 - English
	K - LEL (pentane)	1 - CO	2 - H_2S	3 - O_2	2 - Alkaline UL/CSA	2 - French
	L - LEL (methane)		4 - NO_2		3 - Li-ion (ATEX)	3 - Spanish
	M - CH_4 (0-5%)				4 - Alkaline (ATEX)	4 - German
					5 - Li-ion (MSHA/AUS)	5 - Italian (NA)
					6 - Alkaline (MSHA/AUS)	6 - Dutch
						7 - Portuguese

**Note: There are many possible MX4 configurations. If your specific needs aren't among the common configurations below, please call +1-412-788-4353 or e-mail us at info@indsci.com and we will assist you with the best configuration for your gas detection needs.*

MOST COMMON INSTRUMENT CONFIGURATIONS

PART #	DESCRIPTION
MX4-K12311	MX4 iQuad - LEL, CO, H_2S, O_2, Li-ion
MX4-K12321	MX4 iQuad - LEL, CO, H_2S, O_2, Alkaline
MX4-K14311	MX4 iQuad - LEL, CO, NO_2, O_2, Li-ion
MX4-K10311	MX4 iQuad - LEL, CO, O_2, Li-ion
MX4-K02311	MX4 iQuad - LEL, H_2S, O_2, Li-ion
MX4-K00311	MX4 iQuad - LEL, O_2, Li-ion
MX4-K00011	MX4 iQuad - LEL, Li-ion
MX4-L00011	MX4 iQuad - LEL (methane), Li-ion

REPLACEMENT SENSORS

PART #	DESCRIPTION
17134461	Oxygen (O_2)
17134479	Hydrogen Sulfide (H_2S)
17134487	Carbon Monoxide (CO)
17134495	Combustible Gas (LEL/CH_4)
17134503	Nitrogen Dioxide (NO_2)
17143595	Sulfur Dioxide (SO_2)

OPTIONAL ACCESSORIES

PART #	DESCRIPTION
18107151-ABC	DS2 Docking Station for MX4
Options	A = 0
	B = iGas® Reader (number included)
	1
	2
	3
	C = Power Cord: 0 - US, 1 - UK, 2 - EU, 3 - AUS, 4 - ITA, 5 - DEN, 6 - SWZ
18108100	Single-Unit Charger
18107037	Single-Unit Charger/Datalink
18108282	6-Unit Charger (N. American plug only)
18107680-0X	MX•Cal Calibration Station
	X = Power Cord: 0 - US, 1 - UK, 2 - EU, 3 - AUS, 4 - ITA, 5 - DEN, 6 - SWZ
18107763	Serial data dot matrix printer for MX•Cal
18107904	MX4 Hand Pump (manual bulb)
18107888	Hard-sided Leather Carrying Case
18107813	Soft-sided Carrying Case
17134453-1	Replacement Battery Pack, Li-ion, UL/CSA/ATEX
17134446-1	Replacement Battery Kit, Alkaline, UL/CSA/ATEX (includes pack, cover, and three (3) AAA alkaline batteries)
17134453-2	Replacement Battery Pack, Li-ion, MSHA/AUS
17134446-2	Replacement Battery Kit, Alkaline, MSHA/AUS (includes pack, cover, and three (3) AAA alkaline batteries)

MX•Cal Calibration Station


MX4 Sensors


Serial Data Dot Matrix Printer


MX4 Li-ion Battery


MX4 Alkaline Battery


MX4 Soft-sided Case

iTX Multi-Gas Monitor

- Monitors from one to six gases
- Wide range of field-replaceable sensors
- User and site ID data entry
- Datalogging capability standard
- Dot matrix display with backlighting
- 50 ppm resolution for hydrocarbons
- LEL/CH_4 over-range protection
- 24-hour runtime with Lithium-ion batteries

DS2 DOCKING STATION™

iNet Ready

SPECIFICATIONS

CASE:
Type 304 Stainless Steel

DIMENSIONS:
12.1 cm x 8.1 cm x 4.3 cm (4.75" x 3.2" x 1.68")

WEIGHT:
524.5 g (18.5 oz)

SENSORS:
Combustible Gas/Methane – Catalytic Diffusion
Oxygen and Toxic Gases – Electrochemical

MEASURING RANGES:
Combustible Gases – 0 to 100% LEL in 1% or 50 ppm increments
Methane – 0 to 5% of volume in 0.1% increments
Oxygen – 0 to 30% of volume in 0.1% increments
Carbon Monoxide, Hydrogen, Hydrogen Sulfide, Nitric Oxide – 0 to 999 ppm in 1 ppm increments
Chlorine – 0.2 to 50 ppm in 0.1 ppm increments
Nitrogen Dioxide, Sulfur Dioxide – 0.2 to 99.9 in 0.1 ppm increments
Hydrogen Cyanide, Hydrogen Chloride – 0.2 to 30 ppm in 0.1 ppm increments
Ammonia – 0 to 100 ppm in 1 ppm increments
Chlorine Dioxide, Phosphine – 0 to 1 ppm in 0.01 ppm increments

POWER SOURCE (RUN TIME):
Rechargeable Lithium-ion (Li-ion) Battery Pack (24 hours typical, 15 hours with iSP parasitic pump)
Replaceable AA Alkaline Battery Pack (12 hours typical)

TEMPERATURE RANGE:
-20°C to 50°C (-4°F to 122°F) typical

HUMIDITY RANGE:
15 to 95% RH (non-condensing)

APPROVALS

UL and CSA – Class I, Groups A,B,C,D T4; Class I, Zone 0, Ex ia d IIC T4
MSHA – Intrinsically safe for Methane/Air mixtures only
ATEX – EEx ia d IIC T4; Equipment Group and Category II 2G / I M2
Australia – Ex ia s Zone 0 I IP65
Russia – GOST R

Designed to grow with you as your monitoring needs change, the iTX can go from being a single gas unit to a six-gas monitor, or anything in between. Featuring "smart" sensor technology, the iTX provides simplified, single-button operation and calibration functions. A Quick-Cal feature quickly calibrates up to four sensors at once, saving time and calibration gas costs. With the Docking Station™, it's even easier.

The iTX features a backlit dot matrix LCD that simultaneously displays all gases monitored, ultra-bright visual alarms and a powerful 90 dB audible alarm, all encased in a compact, rugged stainless steel housing to provide maximum durability and RFI protection.

All units offer datalogging of up to 300 hours of survey data at one minute intervals, STEL/TWA and peak readings, and user/site ID data entry. iButton® technology provides automatic field entry for alpha-numeric data input. Designed to be versatile and intuitive, the iTX allows the user to reconfigure the monitor to meet their changing needs. Instrument settings default to the most common choices while the ultimate flexibility is found in the custom selections for 24 configurable parameters, including security code settings, alarm options and calibration preferences. Lifetime Warranty.

SUPPLIED WITH MONITOR

Battery pack as ordered, nylon carrying case, calibration cup with tubing, maintenance tool, instruction manual, and start-up card.

The iTX has many optional sensor and equipment combinations. The matrix below can assist in determining the proper part number for the combination that best suits your needs. For example: An iTX with an O_2 sensor, LEL sensor, CO sensor, H_2S sensor, with a lithium-ion battery, would have the following part number 18104307-11014.

ORDERING INFORMATION

18104307- ABCDEF	A	B	C	D	E	F
	0 - None	0 - None	0 - None	0 - None	0 - None	**English**
	1 - O_2	1 - LEL - Pentane	1 - CO (high)	1 - CO	1 - CO	_ - Li-ion
		2 - CH_4	2 - NO*	2 - NO*	2 - NO*	A - Alkaline
		3 - LEL - Methane	3 - NH_3*	3 - None	3 - None	
			4 - H_2S	4 - H_2S	4 - H_2S	**French**
			5 - SO_2	5 - SO_2	5 - SO_2	1 - Li-ion
			6 - NO_2	6 - NO_2	6 - NO_2	2 - Alkaline
			7 - None	7 - Cl_2	7 - Cl_2	
			8 - None	8 - HCl*	8 - HCl*	**Spanish**
			9 - None	9 - HCN	9 - HCN	5 - Li-ion
			A - None	A - ClO_2	A - ClO_2	6 - Alkaline
			B - CO/H_2Null	B - None	B - None	
			C - None	C - None	C - None	
			D - None	D - PH_3	D - PH_3	
			E - None	E - H_2	E - H_2	
			F - CO/H_2S			

Note: Use sensors in the gray section only for three, five and six gas configurations or for special application sensors.
*** Recommend Li-ion battery option.**

MOST COMMON INSTRUMENT CONFIGURATIONS

Equipped with Li-ion battery; to order with Alkaline batteries, add an 'A' as a suffix.

PART #	DESCRIPTION
18104307-11014	iTX – LEL, O_2, CO, H_2S, Li-ion
18104307-11100	iTX – LEL, O_2, CO, Li-ion
18104307-11400	iTX - LEL, O_2, H_2S, Li-ion
18104307-12100	iTX – CH_4, O_2, CO, Li-ion
18104307-11000	iTX – LEL, O_2, Li-ion
18104307-11126	iTX – LEL, O_2, CO, NO, NO_2, Li-ion
18104307-11145	iTX – LEL, O_2, CO, H_2S, SO_2, Li-ion
18104307-11147	iTX – LEL, O_2, CO, H_2S, Cl_2, Li-ion
18104307-11314	iTX – LEL, O_2, CO, H_2S, NH_3, Li-ion
18104307-11347	iTX – LEL, O_2, NH_3, H_2S, Cl_2, Li-ion

OPTIONAL ACCESSORIES

PART #	DESCRIPTION
18105551-ABC+	DS2 Instrument Docking Station for iTX
18104315	Single-Unit Compact Charger, Universal
18105296	Single-Unit Compact Charger, 12 VDC
18104737-120	iTX Charger w/Datalogging Kit, 120 VAC
18104737-230	iTX Charger w/Datalogging Kit, 230 VAC
18104737-12	iTX Charger w/Datalogging Kit, 12 VDC
18104711-120	iTX Charger/Datalink, 120 VAC
18104711-230	iTX Charger/Datalink, 230 VAC
18104711-12	iTX Charger/Datalink, 12 VDC
18105379	6-Unit Charger w/Flying Leads & Cradle for iTX (universal input)
18106245	iTX Truck-Mount Charger, 12V
18106104	iTX Truck-Mount Charger, (hard-wired)
18104646	iSP Motorized Sampling Pump
18105189	iTX Constant-Flow Hand Aspirated Pump
17088618	Rechargeable Lithium-ion (Li-ion) Battery Pack
17089376	Replaceable Cell Alkaline Battery Pack
18104687	iTX/iSP Nylon Carrying Case
18104703	iTX Leather Carrying Case
16000039	iTX Training Video

+ DS2 Docking Station Ordering Information
A - Wireless Option (currently unavailable) 0 = none
B - iGas Reader (number included) 0 = No iGas Readers
1 = 1 iGas Reader
2 = 2 iGas Readers
3 = 3 iGas Readers
C - Power Cord Option
0 - US; 1 - UK; 2- EU; 3 - AUS; 4 - ITA; 5 - DEN; 6 - SWZ

BM25 Transportable Area Monitor

- Powerful audible alarm (103 dB @ 1m)
- Ultra-bright flashing signal (viewable at 360°)
- Run time up to 170 hours
- Over 4-month datalogging capacity
- Easily transportable: less than 7 kilos

"Plug and Play" Sensors Available:
O_2, CO, H_2S, %LEL, SO_2, NO, NO_2, HCN, HCl, Cl_2, ETO, PH_3, AsH_3, SiH_4, CO_2, H_2, NH_3, PID*

SPECIFICATIONS

CASE MATERIAL:
Impact resistant polycarbonate

DIMENSIONS:
42.5 cm x 16 cm x 13 cm (16.7" x 6.3" x 5.1")

WEIGHT:
6.8 kg (15 lbs)

DISPLAY/READOUT:
Graphic liquid crystal display w/backlight

SENSORS:
Combustible gas – Catalytic Diffusion
Oxygen and Toxic gases – Electrochemical
CO_2 – Infrared
Isobutylene – PID

MEASURING RANGES:
Combustible Gases: 0 to 100% LEL in 1% increments
Oxygen: 0 to 30% of volume in 0.1% increments
Carbon Monoxide, Ammonia 0 to 1,000 ppm in 1 ppm increments
Hydrogen Sulfide 0 to 100 ppm in 1 ppm increments
Hydrogen 0 to 2,000 ppm in 1 ppm increments
Sulfur Dioxide, Nitrogen Dioxide, Hydrogen Chloride, Ethylene Oxide
0 to 30 ppm in 0.1 ppm increments
Chlorine, Hydrogen Cyanide 0 to 10 ppm in 0.1 ppm increments
Nitric Oxide 0 to 300 ppm in 1 ppm increments
Phosphine, Arsine 0 to 1 ppm in 0.01 ppm increments
Silane 0 to 50 ppm in 0.1 ppm increments
Carbon Dioxide 0 to 5% of volume in 0.1% increments
VOC: 2000 ppm equivalent isobutylene in 1 ppm increments*

POWER SOURCE (RUN TIME):
Nickel-Metal Hydride (100 hours, typical)

RECHARGE TIME:
4.5 hours typical

TEMPERATURE RANGE:
-20°C to 50°C (-4°F to 122°F), typical

HUMIDITY RANGE:
15%-95% RH non-condensing (continuous), typical

* PID sensor only availabele for Europe. Please call for information

The BM25 packs the benefits of a fixed system area monitor into a rugged, user-friendly and transportable instrument. It was designed to detect one to five gases for mobile or temporary work applications, team protection, area surveillance, or places where fixed detection systems are not suitable.

Powered by a NiMH battery pack, the BM25 offers up to 170 hours of continuous run time. Other standard features include STEL and TWA values, as well as a datalogging capacity of over four months.

Multiple units can be grouped using optional alarm transfer kits. This protects larger areas by transferring alarms from one BM25 to the next. An intrinsically safe trickle charger is also available for long-term area monitoring in classified zones.

The BM25 is durable and versatile. It is suitable for a wide range of industries including refineries and pharmaceutical production. Applications include turnaround work sites, rig overhauls and fence-line surveillance.

SUPPLIED WITH MONITOR

Instruction manual, calibration adapter, universal input charger, maintenance tool.

APPROVALS

Atex – II 1 G EEx ia IIC T4
I M1 EEx ia I
CSA – Class I, Groups A,B,C,D T4; Ex ia d IIC T4;
C22.2 No. 152 (excluding aspirated and PID sensor configurations)

ORDERING INFORMATION

6514872-ABCDEF	A-E (Available Sensors)	F
	CO	Diffusion
	H_2S	Pump
	O_2	
	NO_2	
	SO_2	
	NH_3	
	Cl_2	
	ClO_2	
	PH_3	
	HCl	
	HCN	
	H_2	
	NO	
	ETO	
	CO/High	
	CO/H_2S	
	LEL	
	CO_2	
	SiH_4	
	ASH_3	

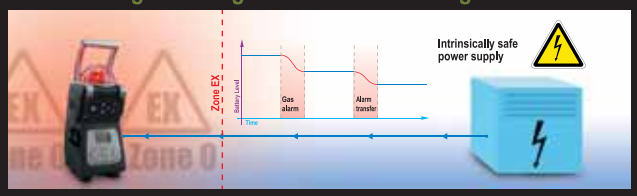
MOST COMMON INSTRUMENT CONFIGURATIONS

PART #	DESCRIPTION
6514872-K12300	BM25 - LEL, CO, H_2S, O_2
6514872-K02300	BM25 - LEL, H_2S, O_2
6514872-K10300	BM25 - LEL, CO, O_2
6514872-K00300	BM25 - LEL, O_2
6514872-K03J50	BM25 - LEL, O_2, CO/H_2S, SO_2
6514872-K02350	BM25 - LEL, H_2S, O_2, SO_2
6514872-K103Q0	BM25 - LEL, CO, O_2, CO_2
6514872-K67300	BM25 - LEL, NH_3, Cl_2, O_2
6514872-K09J30	BM25 - LEL, PH_3, CO/H_2S, O_2
6514872-K12301	BM25 - LEL, CO, H_2S, O_2, Pump
6514872-K02301	BM25 - LEL, CO, H_2S, Pump
6514872-013Q00	BM25 - CO, O_2, CO_2
6514872-010Q00	BM25 - CO, CO_2

Stand alone

Alarm transfer and safety perimeter

Trickle charge for long term area monitoring



OPTIONAL ACCESSORIES

PART #	DESCRIPTION
6511157	BM25 Universal Charger w/Power Cord (N. America)
WLOGUSB	BM25 Datalink Adapter Kit (Software w/USB Adapter Cable)
6321388	BM25 Tripod
6315862	BM25 Alarm Transfer Kit (Cable length = 25 m)
6315863	BM25 Alarm Transfer Kit (Cable length = 50 m)
6315864	BM25 Alarm Transfer Kit (Cable length = 100 m)
6311085	BM25 Intrinsically Safe Trickle Charge Kit (Cable length = 25 m): one IS power supply and wiring arrangements
6311089	BM25 Intrinsically Safe Trickle Charge Kit (Cable length = 50 m): one IS power supply and wiring arrangements
6311093	BM25 Intrinsically Safe Trickle Charge Kit (Cable length = 100 m): one IS power supply and wiring arrangements and wiring arrangements

GasBadge® Pro Single Gas Monitor

- Interchangeable "smart" sensors monitor oxygen or any one of many toxic gases
- One year datalogging capacity (minimum)
- Standard STEL and TWA
- Docking Station™ compatible
- Lifetime warranty

DS2 DOCKING STATION™

iNet Ready

Monitor shown actual size

SPECIFICATIONS

CASE:
Rugged, water resistant polycarbonate shell with protective concussion-proof overmold. RFI resistant.

DIMENSIONS:
9.4 cm x 5.08 cm x 2.79 cm (3.7" x 2" x 1.1")

WEIGHT:
85 g (3 oz)

SENSORS:
Oxygen and Toxic Gases – Electrochemical

MEASURING RANGES:
Carbon Monoxide – 0 to 1,500 ppm in 1 ppm increments
Hydrogen Sulfide – 0 to 500 ppm in 0.1 ppm increments
Oxygen – 0 to 30% by volume in 0.1% increments
Nitrogen Dioxide, Sulfur Dioxide – 0 to 150 ppm in 0.1 ppm increments
Ammonia – 0 to 100 ppm in 1 ppm increments
Chlorine – 0 to 100 ppm in 0.1 ppm increments
Chlorine Dioxide – 0 to 2 ppm in 0.01 ppm increments
Phosphine – 0 to 10 ppm in 0.01 ppm increments
Hydrogen Cyanide – 0 to 30 ppm in 0.1 ppm increments
Hydrogen – 0 to 2,000 ppm in 1 ppm increments

POWER SOURCE (RUN TIME):
User replaceable 3V, CR2 Lithium battery
2,600 hour run time, typical

TEMPERATURE RANGE:
-40°C to 60°C (-40°F to 140°F), typical

HUMIDITY RANGE:
0 to 99% RH (non-condensing), typical

APPROVALS

UL/cUL– Class I, Groups A,B,C,D T4; Class II, Groups E,F,G;
Class I, Zone 0, AEx ia IIC T4
CSA – Ex ia IIC T4
ATEX – EEx ia I/IIC T4
Equipment Group and Category: II 1G / I M2
IECEx – Ex ia IIC T4
Australia – Ex ia I/IIC T4
Russia – GOST R

Built to Industrial Scientific's highest quality and reliability standards, the full-featured GasBadge® Pro provides a lifetime of gas hazard protection with more features than any other single gas monitor available. The instrument can be quickly adapted with interchangeable "smart" sensors to monitor unsafe levels of oxygen or any one of the following toxic gases: carbon monoxide, hydrogen sulfide, nitrogen dioxide, sulfur dioxide, chlorine, chlorine dioxide, phosphine, ammonia, hydrogen cyanide and hydrogen.

Each GasBadge® Pro monitor comes standard with STEL and TWA readings, datalogging of up to one year of survey data, and an event-logger that records the past 15 alarm events. The monitor is customizable for any industry or application, featuring user adjustable alarm and calibration gas setpoints, as well as a user-configurable alert or warning that signals when the instrument is due or overdue for calibration.

Housed in a rugged enclosure, the monitor is immune to radio frequency, water resistant and extremely durable. A protective concussion-proof overmold protects the unit from extreme abuse in a variety of harsh industrial environments. simple and intuitive four-button navigation allows easy access to setup, operation and calibration functions.

At 85 grams (3 ounces), the instrument's compact size and light weight allow it to be worn comfortably with a variety of clip attachments. With the top-mounted sensor, the unit can also provide continuous and unobstructed protection even when placed in a shirt pocket.

Continued

The large, LCD display includes a backlight for clear display visibility in low-light conditions, and international graphic symbols for easy operation. The GasBadge® Pro can be configured to display gas readings in percent by volume or in parts per million, and is capable of showing both gas type and direct gas readings, or just the gas type. The instrument's four-button interface provides intuitive navigation and setup, which can be password-protected for added security.

Designed to provide protection for a minimum of 2,600 continuous hours with a replaceable CR2 Lithium battery, the GasBadge® Pro will alert the user with a powerful audible alarm complemented by vibrating and visual alarms when gas concentrations exceed the preset limits. The standard confidence indicator, automatic self test and user-activated test provide an extra measure of assurance that the GasBadge® Pro is always ready to protect from atmospheric hazards.

GasBadge® Pro is also compatible with the DS2 Docking Station™ to further simplify and automate calibration, function (bump) testing and data management. Lifetime warranty.

SUPPLIED WITH MONITOR

Battery, attached suspender clip, calibration adapter and tubing, and instruction manual.

ORDERING INFORMATION

Standard GasBadge® Pro configurations are listed below. To order the Australian-approved version, add an "A" as a suffix to the part number.

PART #	DESCRIPTION
18100060-1	GasBadge® Pro – Carbon Monoxide
18100060-2	GasBadge® Pro – Hydrogen Sulfide
18100060-3	GasBadge® Pro – Oxygen
18100060-4	GasBadge® Pro – Nitrogen Dioxide
18100060-5	GasBadge® Pro – Sulfur Dioxide
18100060-6	GasBadge® Pro – Ammonia
18100060-7	GasBadge® Pro – Chlorine
18100060-8	GasBadge® Pro – Chlorine Dioxide
18100060-9	GasBadge® Pro – Phosphine
18100060-B	GasBadge® Pro – Hydrogen Cyanide
18100060-C	GasBadge® Pro – Hydrogen
18100060-G	GasBadge® Pro – Carbon Monoxide/Low Hydrogen Interference

OPTIONAL ACCESSORIES

PART #	DESCRIPTION
18106302-ABC+	GasBadge® Pro DS2 Docking Station™
18106260	GasBadge® Datalink – Software included
18106500	GasBadge® Constant-Flow Hand Aspirated Pump
17121963	GasBadge® Neck Lanyard w/Safety Release
18106484	GasBadge® Pro Nylon Carrying Case
18106492	GasBadge® Pro 2-Unit Nylon Carrying Case
17124504	Replacement Water/Dust Sensor Barriers (5 count)

+ DS2 Docking Station Ordering Information

A = Wireless Option (currently unavailable)
0 - none

B = number of iGas Readers
0 = No iGas Readers
1 = 1 iGas Reader
2 = 2 iGas Reader
3 = 3 iGas Reader

C = Power Cord Option
0 - US
1 - UK
2 - EU
3 - AUS
4 - ITA
5 - DEN
6 - SWZ

INSTRUMENT MAINTENANCE SOLUTIONS

DS2 DOCKING STATION™

See Pages 1•2 and 1•3

GasBadge® Plus Personal Single Gas Monitor

Monitor shown actual size

- Low-cost CO, H_2S, O_2, NO_2 or SO_2 monitoring
- 2-year continuous monitoring
- PPM or % by volume readout
- Extremely water resistant – third-party certified IP66 and IP67
- User adjustable alarm and calibration gas setpoints
- Docking Station™ compatible

DS2 DOCKING STATION™

iNet Ready™

SPECIFICATIONS

CASE:
Rugged, water-resistant polycarbonate shell with protective concussion-proof overmold. RFI resistant.

IP RATING:
Third-party certified IP66 and IP67 (water resistant).

DIMENSIONS:
8.13 cm x 4.83 cm x 2.79 cm (3.2" x 1.9" x 1.1")

WEIGHT:
72 g (2.5 oz)

SENSORS:
Oxygen and Toxic Gases – Electrochemical

MEASURING RANGES:
Carbon Monoxide – 0 to 1,500 ppm in 1 ppm increments
Hydrogen Sulfide – 0 to 500 ppm in 0.1 ppm increments
Oxygen – 0 to 30% by volume in 0.1% increments
Nitrogen Dioxide – 0 to 150 ppm in 0.1 ppm increments
Sulfur Dioxide – 0 to 150 ppm in 0.1 ppm increments

POWER SOURCE (RUN TIME):
Non-replaceable Lithium Battery
Maintenance-free operation for 2 years

TEMPERATURE RANGE:
-40°C to 60°C (-40°F to 140°F) typical

HUMIDITY RANGE:
0 to 99% RH (non-condensing) typical

APPROVALS

UL/cUL– Class I, Groups A,B,C,D T4; Class II, Groups E,F,G; Class I, Zone 0, AEx ia IIC T4
CSA – Ex ia IIC T4
MSHA – Intrinsically safe for Methane/Air mixtures only
ATEX – EEx ia I/IIC T4; IP66 and IP67
Equipment Group and Category: II 1G / I M2
IECEx – Ex ia IIC T4; IP66 and IP67
Australia – Ex ia I/IIC T4
Russia – GOST R

GasBadge® Plus provides low-cost, personal protection from dangerous levels of carbon monoxide, hydrogen sulfide, oxygen, nitrogen dioxide or sulfur dioxide with a number of high-end features not found in other similarly priced instruments.

At 72 grams (2.5 ounces), the two-year, maintenance-free monitor's compact size and light weight allow it to be worn comfortably with a variety of clip attachments. With the top-mounted sensor, the unit can also provide continuous and unobstructed protection even when placed in a shirt pocket.

The GasBadge® Plus is housed in a rugged enclosure that is extremely durable and resistant to water and radio frequency interference. A concussion-proof overmold protects the unit from extreme abuse in a variety of harsh industrial environments.

The large, LCD display includes a backlight for clear visibility in low-light conditions and international graphic symbols for easy operation. The GasBadge® Plus can be configured to show both gas type and direct gas readings, or just the gas type. The instrument's two-button interface provides intuitive navigation and setup, which can be password-protected for added security.

With user adjustable alarm and calibration gas setpoints, the monitor can be customized to any industry or application. When gas concentrations exceed the preset limits, GasBadge® Plus alerts the user with a powerful audible alarm complemented by vibrating and visual alarms. The standard confidence indicator, automatic self

Continued

test and user-activated test provide an extra measure of assurance that the GasBadge® Plus is always ready to protect from atmospheric hazards.

Continuous event-logging is a standard feature for the GasBadge Plus with the past 15 alarm events recorded. Optional DS2 Docking Station™, Cal Plus™ calibration station and datalink accessories enable easy instrument maintenance, configuration and data downloading. Two-year warranty.

SUPPLIED WITH MONITOR

Attached suspender clip, calibration adapter and instruction manual.

ORDERING INFORMATION

Standard GasBadge® Plus configurations are listed below. To order the MSHA-approved version, add an "M" as a suffix to the part number. To order the Australian-approved version, add an "A" as a suffix to the part number.

PART #	DESCRIPTION
18100050-1	GasBadge® Plus – Carbon Monoxide
18100050-2	GasBadge® Plus – Hydrogen Sulfide
18100050-3	GasBadge® Plus – Oxygen
18100050-4	GasBadge® Plus – Nitrogen Dioxide
18100050-5	GasBadge® Plus – Sulfur Dioxide

See Pages 1•2 and 1•3

OPTIONAL ACCESSORIES

PART #	DESCRIPTION	
18107698-ABC+	DS2 Instrument Docking Station (IDS) for GasBadge® Plus	
18106344-0X	Cal Plus™ Calibration Station (calibration gas & regulator not included)	
18106344-1X	Cal Plus™ Calibration Station w/On-Board Dot Matrix Printer (calibration gas & regulator not included)	
	X = Power Cord	0 - N. American Plug
		1 - UK Plug
		2 - European Plug
		3 - Australian Plug
18106260	GasBadge® Datalink – Software included	
18106500	GasBadge® Constant-Flow Hand Aspirated Pump	
17121963	GasBadge® Neck Lanyard w/Safety Release	
18106401	GasBadge® Plus Nylon Carrying Case	
18106419	GasBadge® Plus 2-Unit Nylon Carrying Case	
17124504	Replacement Water/Dust Sensor Barriers (5 count)	
17117722	Serial Data Dot Matrix Printer, 120-230 VAC	

+ DS2 Docking Station Ordering Information

A = Wireless Option (currently unavailable)
0 - none

B = number of iGas Readers
0 = No iGas Readers
1 = 1 iGas Reader
2 = 2 iGas Reader
3 = 3 iGas Reader

C = Power Cord Option
0 - US
1 - UK
2 - EU
3 - AUS
4 - ITA
5 - DEN
6 - SWZ

M40 Multi-Gas Monitor

- 1 to 4 gas monitoring for O_2, H_2S, CO and combustible gases
- 18-hour runtime with lithium-ion battery
- Includes vibrating, 90 dB audible, and LED visual alarms
- Two-year, all inclusive warranty

SPECIFICATIONS

CASE:
High-visibility, impact resistant composite – RFI, EMI & IP65 approved

DIMENSIONS:
10.9 cm x 6.22 cm x 3.48 cm (4.30" x 2.45" x 1.37")

WEIGHT:
244 g (8.6 oz). Weight with pump: 326 g (11.6 oz)

SENSORS:
Combustible Gases – Catalytic Diffusion
Oxygen and Toxic Gases – Electrochemical

MEASURING RANGES:
Combustibles – 0 to 100% LEL in 1% increments
Methane – 0 to 5% of volume in 0.1% increments (M40•M only)
Oxygen – 0 to 30% of volume in 0.1% increments
Carbon Monoxide – 0 to 999 ppm in 1 ppm increments
Hydrogen Sulfide – 0 to 500 ppm in 1 ppm increments

POWER SOURCE (RUN TIME):
Rechargeable Lithium-ion (Li-ion) Integral Battery
(18 hours typical, 12 hours with SP40 parasitic pump)

DATALOGGING:
Up to 75 hours of datalogging capability

TEMPERATURE RANGE:
-20°C to 50°C (-4°F to 122°F)

HUMIDITY RANGE:
15 to 95% RH (non-condensing), typical
0 to 99% RH (non-condensing), intermittent use

APPROVALS

UL– Class I, Groups A,B,C,D T4; Class I, Zone 0, AEx ia d IIC T4
CSA – Class I, Groups A,B,C,D T4
MSHA (M40•M only) – Intrinsically safe for Methane/Air mixtures only
ATEX – EEx ia d IIC T4
Equipment Group and Category II 2G
Australia – Ex ia s Zone 0 IIC T4
Russia – GOST R

Industrial Scientific is pleased to offer the M40, a versatile multi-gas monitor capable of detecting CO, H_2S, O_2, and combustible gases for a wide variety of hazardous and confined space applications.

The M40 is housed in a rugged, impact-resistant case to provide superior performance and durability in harsh environments and resistance to radio-frequency and electromagnetic interference. Its four-button interface provides simple, intuitive operation and calibration and the M40's five-second "Off" feature prevents unintentional shut-offs. The unit's compact size and economical price make it an ideal personal monitoring instrument.

Other standard features include a vibrating alarm, lithium-ion battery, peak/hold readings, large LCD with graphic icons, 75 hour datalogging capacity, and belt clip. An optional compact parasitic sampling pump enables remote sampling from up to 50 feet away.

The M40 Confined Space Kit provides all the equipment necessary to operate and maintain the M40 Multi-Gas Monitor in everyday confined space applications. Each kit includes the M40 monitor, SP40 sampling pump, combination carrying case, compact charger, calibration gas, regulator, replacement filters and sample tubing … everything you need to ensure that the instrument is ready to help keep you safe in the confined space while you focus on getting the job done. The M40 carries a two-year warranty.

SUPPLIED WITH MONITOR

Compact charger, calibration cup, tubing, leather carrying case, suspender clip and instruction manual.

SUPPLIED WITH MONITOR/PUMP COMBINATION

Compact charger, calibration cup, tubing, dust filter/water stop, suspender clip, combo monitor/pump leather carrying case and instruction manual.

SUPPLIED WITH CONFINED SPACE KIT

Compact charger, calibration cup, tubing, gas cylinder, regulator valve, water barrier assembly, filter, combo monitor/pump leather carrying case, utility case and instruction manual.

M40 ORDERING INFORMATION

PART #	DESCRIPTION
18105437-01111	M40 – O_2, LEL, CO, H_2S
18105437-01110	M40 – O_2, LEL, H_2S
18105437-01101	M40 – O_2, LEL, CO
18105437-00110	M40 – H_2S, LEL
18105437-01100	M40 – O_2, LEL
18105437-00100	M40 – LEL
18105437-11111	M40/SP40 Pump Combination – O_2, LEL, CO, H_2S
18105437-11110	M40/SP40 Pump Combination – O_2, LEL, H_2S
18105437-11101	M40/SP40 Pump Combination – O_2, LEL, CO
18105437-11100	M40/SP40 Pump Combination – O_2, LEL
18105437-10100	M40/SP40 Pump Combination – LEL
M40-KIT-11111	M40 Confined Space Kit (w/Pump) – O_2, LEL, CO, H_2S
M40-KIT-11101	M40 Confined Space Kit (w/Pump) – O_2, LEL, CO
M40-KIT-11110	M40 Confined Space Kit (w/Pump) – O_2, LEL, H_2S

The M40 Confined Space Kits provide all the equipment you need to operate and maintain the M40 Multi-Gas Monitor in everyday confined space applications.

The MSHA-approved M40•M multi-sensor monitor is designed for use in mines and other work environments to assure optimum personal protection against oxygen (O_2) deficiency and enrichment, hazardous levels of methane gas (CH_4), as well as toxic levels of carbon monoxide (CO) and, if applicable, hydrogen sulfide (H_2S).

M40•M ORDERING INFORMATION

PART #	DESCRIPTION
18105940-01111	M40•M – O_2, CH_4, CO, H_2S
18105940-01110	M40•M – O_2, CH_4, H_2S
18105940-01101	M40•M – O_2, CH_4, CO
18105940-01100	M40•M – O_2, CH_4
18105940-00100	M40•M – CH_4
18105957	SP40•M Motorized Sampling Pump
18105940-11111	M40•M/SP40•M Pump Combination – O_2, CH_4, CO, H_2S
18105940-11110	M40•M/SP40•M Pump Combination – O_2, CH_4, H_2S
18105940-11101	M40•M/SP40•M Pump Combination – O_2, CH_4, CO
18105940-11100	M40•M/SP40•M Pump Combination – O_2, CH_4
M40MKIT-11111	M40•M Confined Space Kit (w/Pump) – O_2, CH_4, CO, H_2S
M40MKIT-11110	M40•M Confined Space Kit (w/Pump) – O_2, CH_4, H_2S
M40MKIT-11101	M40•M Confined Space Kit (w/Pump) – O_2, CH_4, CO
M40MKIT-11100	M40•M Confined Space Kit (w/Pump) – O_2, CH_4

OPTIONAL ACCESSORIES

PART #	DESCRIPTION
18105460	SP40 Motorized Sampling Pump
18106062	M40 Constant-Flow Hand Aspirated Pump
18105528	M40 Datalink
18105478	M40 Nylon Carrying Case
18105486	M40/SP40 Combination Nylon Carrying Case
18106393	Single-Unit Compact Charger, Universal
18105502	Single-Unit Automotive Charger, 12 VDC
18105510	6-Unit Charger w/Flying Leads & Cradle for M40
18106229-1	M40 Truck-Mount Charger, 12V
18106229-2	M40/SP40 Truck-Mount Charger, 12V
18106237-1	M40 Truck-Mount Charger, (hard-wired)
18106237-2	M40/SP40 Truck-Mount Charger, (hard-wired)
17092941	Metal Belt Clip
17107582	Suspender Clip
18106070	CO Breath Sampler for M40

M•Cal™ Calibration Station

The M•Cal™ Calibration Station is capable of calibrating, function (bump) testing, and charging the M40 instrument as well as the M40/SP40 instrument/pump combination. Available in single-unit, and six-unit versions, the M•Cal™ can be ordered in any configuration of bays for M40 or M40/SP40 combinations. A serial connector provides simple connection to a serial data printer for hard-copy printouts of each calibration and bump test.

SPECIFICATIONS

MONITORS SUPPORTED:
M40 Software versions 4.0 and higher

CONFIGURATIONS:
M40 only version
M40/SP40 pump version
Six-unit versions (all configurations)

DIMENSIONS (Single-Unit):
10.24 cm x 15.24 cm x 17.78 cm (4.03" x 6" x 7")

DIMENSIONS (Six-Unit):
12.5 cm x 31.06 cm x 33.02 cm (4.92" x 12.23" x 13")

GAS INLETS:
One fresh air, one gas cylinder

PUMP FLOW RATE:
0.25 LPM

INPUT:
Universal AC power supply; 110/240 VAC

COMMUNICATION:
On-board LEDs give status indication (pass, fail, charging). Real-time readings on M40 display during calibration.

INTERNAL MEMORY:
Stores up to 150 bump test and calibration reports before overwrite. Reports contain serial number, time, date, sensor information, pass/fail, span values and bump values (for bump tests). Memory will retain information when power is off.

M•CAL™ ORDERING INFORMATION

PART #	DESCRIPTION	
18105973-ABX	Six-Unit M•Cal™	
18105965-10X	Single-Unit M•Cal™, M40 Bay	
18105965-01X	Single-Unit M•Cal™, M40/SP40 Bay	
	A = # of M40 Bays* (0-6)	
	B = # of M40/SP40 Bays* (0-6)	
	X = Power Cord	0 - N. American Plug
		1 - UK Plug
		2 - European Plug
		3 - Australian Plug (*Note A+B = 6)

The six-unit M•Cal406™ Calibration Station

OPTIONAL ACCESSORIES

PART #	DESCRIPTION
17117722	Serial Data Dot Matrix Printer – 120-230 VAC
17119843	Replacement Cable for M•Cal to PC Interface, 6' Null Modem F/F
17118118	Replacement Power Supply
M40-KIT-DFR0000	M•Cal™ Accessory Kit (demand flow regulator, calibration gas cylinder, tubing)
18102187	Calibration/Bump Gas, 58L (100 PPM CO, 25 PPM H_2S, 25% LEL pentane, O_2)
18102242	Calibration/Bump Gas, 58L (100 PPM CO, 25 PPM H_2S, 50% LEL methane, O_2)
17124348	Wall/Desk Mount Cylinder Holder
18102509	Demand Flow Regulator for 58L/103L/34L aluminum cylinders

Cal Plus™ shown with built-in printer option for immediate report documentation

Cal Plus™ Calibration Station

With the new Cal Plus™ Calibration Station, calibrating and bump testing the GasBadge® Plus Monitor has never been easier or more cost-effective. The Cal Plus features simple, two-button operation allowing the user to quickly and easily calibrate or function (bump) test the instrument. The large LCD display and LED indicators then show whether or not the instrument passed or failed the desired function.

The Cal Plus is also available with a built-in dot-matrix printer that automatically prints calibration and bump test reports to provide permanent documentation of instrument serial numbers, pass/fail indications, bump test readings and full span readings for the GasBadge® Plus.

A PC is not required to operate this stand-alone system, making the unit extremely portable and flexible. For a space-saving alternative the unit can be mounted to a wall along with an optional calibration gas cylinder holder. When used with a PC, alarm events, instrument details, and calibration and bump test reports are automatically downloaded via a standard USB connection for quick and easy data collection or instrument configuration.

SPECIFICATIONS

MONITOR SUPPORTED:
GasBadge® Plus (all versions)

CONFIGURATIONS:
Single Unit
Single Unit with Internal Printer

DIMENSIONS (Single-Unit):
7.6 cm x 23.6 cm x 19.3 cm (3" x 9.3" x 7.6")

DIMENSIONS (Single-Unit with Printer):
7.6 cm x 37 cm x 19.3 cm (3" x 14.55" x 7.6")

GAS INLETS:
One fresh air, one gas cylinder

PUMP FLOW RATE:
0.25 LPM

INPUT:
Universal AC power supply; 110/240 VAC

COMMUNICATION:
On-board LEDs give status indication (pass, fail). Multilingual LCD display shows Cal Plus™ status and set-up menus. Real-time readings on GasBadge® Plus display during calibration.

INTERNAL MEMORY:
Stores up to 200 bump test and calibration reports before overwrite. Reports contain serial number, time, date, sensor information, pass/fail, span values and bump values (for bump tests). Memory will retain information when power is off.

CAL PLUS™ ORDERING INFORMATION

PART #	DESCRIPTION	
18106344-0X	Cal Plus™ Calibration Station (calibration gas and regulator not included)	
18106344-1X	Cal Plus™ Calibration Station w/on-board dot matrix printer (calibration gas and regulator not included)	
	X = Power Cord	0 - N. American Plug
		1 - UK Plug
		2 - European Plug
		3 - Australian Plug

OPTIONAL ACCESSORIES

PART #	DESCRIPTION
17117722	Serial Data Dot Matrix Printer, 120-230 VAC
17127044	Replacement Ribbon for Cal Plus Internal Printer (Epson ERC-22)
17135518	Replacement Printer Paper Roll (57 mm x 48 mm x 25 m)
18102163	Calibration Gas – Carbon Monoxide, 100 ppm, 103L
18100859	Calibration Gas – Hydrogen Sulfide, 25 ppm, 58L
18102219	Calibration Gas – Nitrogen Dioxide, 5 ppm, 58L
18102222	Calibration Gas – Sulfur Dioxide, 5 ppm, 58L
17124348	Wall/Desk Mount Cylinder Holder
18102509	Demand Flow Regulator for 58L/103L/34L aluminum cylinders

MX6 iBrid™ Confined Space Kit

Prior to working in any confined space environment, it's essential to have the right tools to ensure safe entry. Industrial Scientific's Confined Space Kits are designed to make that as simple as possible.

Everything you'll need to test the atmosphere prior to entering a confined space is included in one durable, easy-to-transport carrying case.

Your monitor choice determines the additional accessories that are included in the kit, as some monitors, are built with internal sampling pumps.

In addition to providing the gas monitoring equipment for confined space entry, Industrial Scientific offers training classes and educational tools for large or small groups.

MX6 iBRID™ CONFINED SPACE KITS

PART #	DESCRIPTION
MX6KIT-K1230211	MX6 Kit, LEL, O_2, H_2S, CO, Ext. Li-ion, Pump
MX6KIT-K123R211	MX6 Kit, LEL, O_2, H_2S, CO, PID, Ext. Li-ion, Pump
MX6KIT-0000R211	MX6 Kit - PID, Ext. Li-ion, Pump

MX6 iBrid™ Confined Space Kits Include: Choice of MX6 monitor, universal charger, nylon carrying case, belt clip, calibration cup, wrist strap, maintenance tool, manual, quick start guide, calibration tubing, dust filter/water stop (aspirated), calibration fitting (aspirated), sample tubing (aspirated), calibration gas (appropriate mix) with regulator, spare replaceable cell alkaline battery pack, rugged Pelican® case.

M40 AND M40•M CONFINED SPACE KITS

PART #	DESCRIPTION
M40-KIT-11111	M40 Kit – O_2, LEL, CO, H_2S
M40-KIT-11101	M40 Kit – O_2, LEL, CO
M40-KIT-11110	M40 Kit – O_2, LEL, H_2S
M40MKIT-11111	M40•m Kit – O_2, CH_4, CO, H_2S
M40MKIT-11110	M40•m Kit – O_2, CH_4, H_2S
M40MKIT-11101	M40•m Kit – O_2, CH_4, CO
M40MKIT-11100	M40•m Kit – O_2, CH_4

M40 and M40•M Confined Space Kits Include: Choice of M40 or M40•M monitor, SP40 or SP40•M sampling pump, compact charger, calibration cup, tubing, gas cylinder, regulator valve, cell-phone style belt clip, water barrier assembly, filter, combo monitor/pump leather carrying case, utility case and instruction manual.

iTX ECONOMY CONFINED SPACE KITS

PART #	DESCRIPTION
iTX-Kit-E11014*	Economy iTX – LEL, O_2, H_2S, CO, Li-ion, 120V
iTX-Kit-E11F00*	Economy iTX – LEL, O_2, CO/H_2S, Li-ion, 120V
iTX-Kit-E11100*	Economy iTX – LEL, O_2, CO, Li-ion, 120V
iTX-Kit-E11400*	Economy iTX – LEL, O_2, H_2S, Li-ion, 120V
iTX-Kit-E11000*	Economy iTX – LEL, O_2, Li-ion, 120V

Economy Confined Space Kits contain all of the essential equipment at an economical cost including: Choice of iTX monitor, instrument carrying case, constant flow hand pump, 10 feet of tubing, replacement sampling pump filters, compact charger (rechargeable battery versions), calibration cup with tubing, training video, durable carrying case.

** Add '1' to part number for 230 VAC charger, price is the same.*

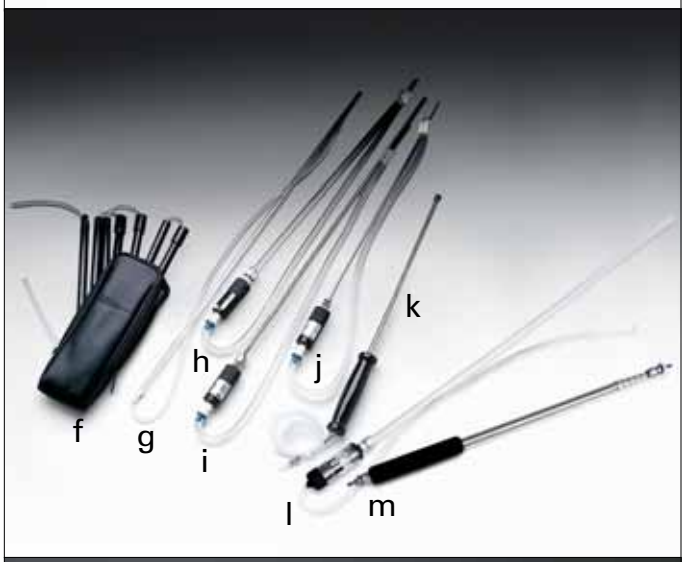
iTX DELUXE CONFINED SPACE KITS

PART #	DESCRIPTION
iTX-Kit-P11014*	Professional iTX – LEL, O_2, H_2S, CO, Li-ion, 120V
iTX-Kit-D11014*	Deluxe iTX – LEL, O_2, H_2S, CO, Li-ion, 120V
iTX-Kit-D11100*	Deluxe iTX – LEL, O_2, CO, Li-ion, 120V
iTX-Kit-D11400*	Deluxe iTX – LEL, O_2, H_2S, Li-ion, 120V
iTX-Kit-D11000*	Deluxe iTX – LEL, O_2, Li-ion, 120V

Deluxe Confined Space Kits come in a variety of options and include: Choice of iTX monitor, instrument carrying case, motorized sampling pump (iTX), 10 ft. of tubing, replacement sampling pump filters, compact charger (rechargeable versions only), charger/datalink (iTX Professional kits only), calibration cup with tubing, calibration gas (appropriate mix) with regulator, spare replaceable cell alkaline battery pack, training video, rugged Pelican® case.

** Add '1' to part number for 230 VAC charger, price is the same.*

At Industrial Scientific, we know that no two working environments are the same. Loud or quiet. Hot or cold. Indoors or outdoors. Confined space or open field. No matter what the working environment, it's absolutely essential that our customers have the tools to best adapt to their specific situations. Industrial Scientific accessories are designed to meet the individual needs of each of these users, and enable them to operate with confidence.



Sampling pumps and hand aspirators provide the ability to check for the presence of potentially hazardous atmospheres in a remote area or confined space. Motorized pumps include low flow indicators. The iSP and the SP402 offer audible and visual low flow, low battery and fail warnings. All pumps and aspirators come with 10 feet of tubing and detailed operating instructions. Additional tubing is available for long distance remote sampling.

Sampling Pumps:
(a) SP402 Motorized Sampling Pump
(b) Constant-Flow Hand Aspirated Pump
(c) SP40 Motorized Sampling Pump
(d) iSP Motorized Sampling Pump
(e) SP6 Motorized Pump Module

Industrial Scientific sampling probes are available in many sizes and types to best fit the needs of most any remote sampling requirement. Probes are used in conjunction with Industrial Scientific sampling pumps or instruments with internal pumps.

Sampling Probes:
(f) 4.5-Ft. Folding Probe with Tubing
(g) 4-Ft. Polycarbonate Probe with Tubing
(h) 1.5-Ft. Polycarbonate Probe with Filter
(i) 3-Ft. Stainless Steel Bar Hole Probe
(j) 1.5-Ft. Stainless Steel Flue Gas Probe
(k) 3-Ft. Extendible Metal Probe with Teflon Tubing Insert
(l) 3-Ft. Polycarbonate Probe w/High Capacity Filter
(m) 6-Ft. Extendible Stainless Steel Probe

Adequate air flow is critical for proper remote sampling. All filters should be replaced when dirt or water inhibits air flow. Quick disconnect fittings allow easy, no-fuss connection to secure tubing to sampling pumps.

Additional Remote Sampling Equipment:
(n) Inline High Capacity Water Stop
(o) Dust Filter/Water Stop (0.45 micron) for Motorized Sampling Pumps
(p) Inline Dust Filter
(q) Dilution Tube
(r) Quick Disconnect Fitting, Female
(s) Replacement Filter for iSP, SP402, SP202, SP100 Pumps
(t) Dust Filter/Water Stop (1.2 micron) for ATX Series
(u) Quick Disconnect Fitting, Male, Threaded
(v) Luer Fitting, Male, 1/8" or 3/16" Barb
(w) Quick Disconnect Fitting, Male, 1/8" Barb
(x) Quick Disconnect Fitting, Male, 3/16" Barb

SP6 MOTORIZED SAMPLING PUMP
(for use with all MX6 iBrid™ Instruments)

PART #	DESCRIPTION
18106765	(e) SP6 Motorized Sampling Pump Module

iSP MOTORIZED SAMPLING PUMP
(for use with all iTX Instruments)

PART #	DESCRIPTION
18104646	(d) iSP Motorized Sampling Pump

SP402 MOTORIZED SAMPLING PUMPS
(for use with MG140 and all 300 and 400 Series Instruments)

Motorized pumps operate on Ni-Cad, Lithium or Alkaline batteries
(add the suffix "L" for the Lithium version or "A" for the Alkaline version)

PART #	DESCRIPTION
18102156	(a) SP402 Sampling Pump for 300/400 Series
18102169	(a) SP402 Sampling Pump for 300/400 Series, CSA

SP40 MOTORIZED SAMPLING PUMP
(for use with all M40 and M40•M Instruments)

PART #	DESCRIPTION
18105460	(c) SP40 Sampling Pump for M40
18105957	(c) SP40 Sampling Pump for M40•M

CONSTANT FLOW HAND PUMPS

Economical operation with a supplied tubing length of 10'

PART #	DESCRIPTION
18107078	(b) Constant-Flow Hand Aspirated Pump for MX6
18105189	(b) Constant-Flow Hand Aspirated Pump for iTX
18106062	(b) Constant-Flow Hand Aspirated Pump for M40
18106500	(b) Constant-Flow Hand Aspirated Pump for GasBadge®

SAMPLING PROBES

	18105155 MX6 Inlet Probe Adapter*	**18105064** MX6 High Capacity Filter Adapter*
0 = 1/8" Female NPT Connection		
1 = 1/8" Hose Barb Fitting		
2 = Female Quick Connect Coupling		
3 = 8" Teflon Probe		
4 = 10" Stainless Steel Probe		
5 = 18" Polycarbonate Probe		

**17136540 filter cap is required.*

QUESTIONS ABOUT REMOTE SAMPLING?

Call your local representative or e-mail: info@indsci.com. Our customer service representatives can answer your questions about remote sampling, or provide detailed information about hazardous gases that may be in your workplace environment.

SAMPLING PROBES

PART #	DESCRIPTION
18102111	(f) 4.5' Folding Probe w/Tubing
18101428	(g) 4' Polycarbonate Probe w/Tubing
18101386	(m) 6' Extendible Stainless Steel Probe
18102309	(h) 1.5' Polycarbonate Probe w/Filter
18102306	(i) 3' Stainless Steel Bar Hole Probe w/Filter
18102276	(j) 1.5' Stainless Steel Flue Gas Probe w/Filter (to 1,500° F)
18102246	(k) 3' Extendible Probe w/Teflon Tubing Insert
18103309	Aluminum Coiled Probe (800-900° F) (not pictured)
18104299	(l) 3' Polycarbonate Probe w/High Capacity Filter
18105239	ATX 90° Quick Disconnect Probe Kit

ADDITIONAL REMOTE SAMPLING EQUIPMENT

PART #	DESCRIPTION
18102277	(n) Inline High Capacity Water Stop
17057803	Replacement Gortex Filter Insert for 18102277
17027152	(o) Dust Filter/Water Stop for Motorized Sampling Pumps
17050908	(p) Inline Dust Filter for iSP/SP402/SP202/SP100 Pumps
17041740	(q) Dilution Tube (for use w/Sampling Pumps)
17050688	(r) Quick Disconnect Fitting, Female
17024597	(s) Replacement Filter for iSP, SP402, SP202, SP100 Pumps
17024191	(s) Replacement Filters (Package of 5)
17058157	(t) Internal Dust Filter/WaterStop for MX6/ATX Series
17051611	(u) Quick Disconnect Fitting, Male, Threaded
17048273	(v) Luer Fitting, Male, 1/8" Barb
17050698	(v) Luer Fitting Male, 3/16" Barb
17050689	(w) Quick Disconnect Fitting, Male, 1/8" Barb
17050775	(x) Quick Disconnect Fitting, Male, 3/16" Barb
17062498	Replacement Inlet Filter Assembly for ATX Series
17067034	ATX Right Angle Inlet Swivel Fitting
17051319	Dust Filter/Water Stop for Hand Pumps
17007592	Tygon Tubing, 1/8" ID (per foot)
17102005	Urethane Tubing, Black, 1/8" ID (per foot)
17093659	Urethane Tubing 3/16" ID (per foot)
18108043	6' Extendible Probe Tubing Kit for MX6
18102257	6' Extendible Probe Tubing Kit for iTX, 300/400 Series
17051701	Replacement Probe Fitting for 18101386
17113168	SP40 Water Barrier
17119553	iSP Filter Guard
18102418	10' Sample Tube w/Inline Filter
17136540	SP6 Filter Cap (used w/18105155-X)

The MX6 Chargers and Charger/Datalink accessories can charge the lithium-ion battery packs either installed or separate from the instrument. The Charger/Datalink option includes a software and PC connection cable for instantly downloading event logs and datalog data, or changing instrument settings while the instrument battery charges. Single-unit and 5-unit charger versions all have universal power adapters included for global requirements. Truck-mounted chargers (not shown) are also available in your choice of a standard cigarette lighter adapter or hard-wired options. These options provide convenience where instrument use is based out of a vehicle such as a fire engine or utility truck. Replaceable cell alkaline battery packs and an extended-range (36 hours typical) lithium-ion battery pack provide flexible options and back up power in emergency situations.

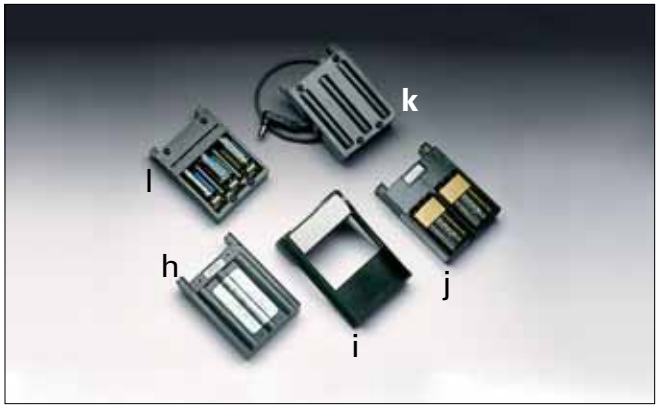
(a) MX6 Replacement Battery Charger
(b) MX6 Battery Charger, 5-Unit
(shown with MX6 Unit – not included)
(c) MX6 Battery Charger/Datalink, universal

The iTX Charger/Datalink accessories provide the ability to charge the lithium-ion battery packs in 5 hours or less (in or out of the instrument) and serve as the instruments' communication link to a personal computer. The chargers are available with or without the datalogging kit, which allows users to download hygiene data. Replaceable cell alkaline battery packs provide backup power in emergency situations. Single-unit and 6-unit chargers (not shown) are also available for the iTX monitors in your choice of voltage options.

(d) Single-Unit, Universal Compact Charger for iTX
(e) iTX Charger/Datalink
(f) iTX/VX500 Alkaline Battery Pack
(g) iTX/VX500 Rechargeable Lithium-ion Battery Pack

Using additional charging accessories from Industrial Scientific, instrument operation can continue uninterrupted. When a battery becomes low, simply replace it with a spare pack and continue monitoring. Or, utilize a charging adapter to charge a 300 or 400 Series battery pack with a compact charger.

(h) Spare Battery Pack for the 300 & 400 Series (Ni-Cad)
(i) Battery Charging Adapter for the 300 & 400 Series
(j) Spare Battery Pack for the 300 & 400 Series
(Disposable 9-volt Alkaline)
(k) Flying Lead Adapter for Dual Rate Chargers
(l) Spare Battery Pack for the 300 & 400 Series (Disposable Lithium Cells)



MX6 iBRID™ CHARGERS AND BATTERIES

PART #	DESCRIPTION
18106971	(a) MX6 Battery Charger (supplied w/MX6)
18107094	(c) MX6 Battery Charger/Datalink, universal – Software included
18107011	MX6 Battery Charger, 12V
18107136	(b) MX6 Battery Charger, 5-Unit (shown w/MX6 Unit - not included)
18107243	MX6 Truck-Mount Charger
18107250	MX6 Truck-Mount Charger, (hard-wired)
17131038-1	Li-ion Battery Pack, UL/CSA/ATEX, MX6 iBrid™
17131038-2	Li-ion Ext. Battery Pack, UL/CSA/ATEX, MX6 iBrid™
17131038-4	Li-ion Battery Pack, MSHA/AUS, MX6 iBrid™
17131038-5	Li-ion Ext. Battery Pack, MSHA/AUS, MX6 iBrid™
17131046-3	Alkaline Battery Pack, UL/CSA/ATEX, MX6 iBrid™
17131046-6	Alkaline Battery Pack, MSHA/AUS, MX6 iBrid™

iTX CHARGERS AND iTX/VX500 BATTERIES

PART #	DESCRIPTION
18104315	(d) Single-Unit, Compact Charger for iTX, Universal
18105296	Single-Unit, Compact Charger for iTX, 12 VDC
18104737-120	(e) iTX Charger w/Datalogging Kit, 120 VAC
18104737-230	(e) iTX Charger w/Datalogging Kit, 230 VAC
18104737-12	(e) iTX Charger w/Datalogging Kit, 12 VDC
18104711-120	(e) iTX Charger/Datalink, 120 VAC
18104711-230	(e) iTX Charger/Datalink, 230 VAC
18104711-12	(e) iTX Charger/Datalink, 12 VDC
18105379	6-Unit Charger w/Flying Leads & Cradle for iTX (universal input)
18106245	iTX Truck-Mount Charger (cigarette lighter adapter)
18106104	iTX Truck-Mount Charger (hard-wired)
17089376	(f) Replaceable Cell Alkaline Battery Pack for iTX/VX500
17088618	(g) Rechargeable Lithium Ion Battery Pack for iTX/VX500

M40 CHARGERS

PART #	DESCRIPTION
18106393	Single-Unit Compact Charger, Universal
18105502	Single-Unit Automotive Charger, 12 VDC
18105510	6-Unit Charger w/Flying Leads & Cradle for M40
18106229-1	M40 Truck-Mount Charger (cigarette adapter)
18106237-1	M40 Truck-Mount Charger (hard-wired)
18106229-2	M40/SP40 Truck-Mount Charger (cigarette adapter)
18106237-2	M40/SP40 Truck-Mount Charger (hard-wired)

300/400 SERIES CHARGERS

PART #	DESCRIPTION
18102145	Single-Unit, Compact Charger, 12 VDC, 300/400 Series
18102251	Two-Unit, Compact Charger, 120 VAC, 300/400 Series
18102231	Two-Unit, Compact Charger, 230 VAC, 300/400 Series
18102558	Two-Unit "Smart" Charger, 120 VAC for 300/400 Series

BATTERIES/ADDITIONAL CHARGING ACCESSORIES

PART #	DESCRIPTION
17059494	Spare Battery Pack, "Smart" Charger Ni-Cad, 600 Series
17063884	Ni-Cad Battery Replacement Module, 600 Series
17059312	Spare Battery Pack, Alkaline, 600 Series
17041872	(h) Ni-Cad Battery Pack, 300/400 Series
17054735	(h) Ni-Cad Battery Pack, 300/400 Series, Australian Approved
18102217	(i) Battery Charging Adapter, 300/400 Series
17067174	(j) Replaceable 9-volt Alkaline Battery Pack, 300/400 Series
18102266	(k) Flying Lead Adapter for Dual Rate Chargers
17049889	(l) Replaceable Cell Lithium Battery Pack, 300/400 Series
17047747	Lithium Battery, 3V, for 300/400 Series & STX70
17031063	Ni-Cad Battery Pack, 200 Series Multi-Gas
17025305	Ni-Cad Battery Pack, CD211
17024688	Ni-Cad Battery Pack, SP202
17022377	Spare Alkaline Battery Holder, 200 Series Single Gas
17061755	Lithium Battery, 9V, T82
18103093	Charging Adapter, 12 VDC Input, Ni-Cad, ATX
17123019	Lithium Battery, 3V, GasBadge® Pro

2•6 Instrument Carrying Cases

Carrying cases permit "hands-free" operation, making portable gas monitoring instruments even more convenient to use. In order to provide maximum versatility for all of our portable instruments, Industrial Scientific offers a variety of optional carrying cases to fit any model. For assistance in selecting the appropriate carrying case for your Industrial Scientific instruments, call your local representative, or e-mail: info@indsci.com.

INDUSTRIAL SCIENTIFIC CARRYING CASES

PART #	DESCRIPTION
18106856-0	Hard Leather Carrying Case, Diffusion, MX6 iBrid™
18106856-1	Hard Leather Case, Diffusion (no display window), MX6 iBrid™
18106880-0	(a) Hard Leather Carrying Case, Aspirated, MX6 iBrid™
18106880-1	(b) Hard Leather Case, Aspirated (no display window), MX6 iBrid™
18104703	(c) Leather Carrying Case, iTX
18106369	Leather Carrying Case, Heavy-Duty w/Window, iTX
18106567	Leather Carrying Case, Heavy-Duty, w/o Window, iTX
18103259	Leather Carrying Case, ATX Series
18103267	Leather Carrying Case, ATX Series, MSHA Required
18102921	ATX Series Carrying Handle (for 18103259/18103267)
18101824	Leather Carrying Case, 400 Series (supplied w/TMX412/TX418)
18102798	Leather Carrying Case, T82/T80
18102161	Leather Carrying Case, Combination Instrument/SP402
18102201	Leather Carrying Case, 300 Series (supplied w/312/311/310)
18102308	Leather Carrying Case, MDU420/CDU440
18103192	Leather Carrying Case, MDU420/CDU440 (MSHA Approved)
18105981	Soft Sided Carrying Case, M40 (supplied with M40)
18105999	Leather Carrying Case, Combination M40/SP40 (supplied w/Inst./Pump Combos)
18106575	Leather Carrying Case, Heavy-Duty w/ Window, M40/M40•M
18106559	Leather Carrying Case, Heavy-Duty w/o Window, M40/M40•M
18100628	Detachable Shoulder Strap for Leather Cases
17090572	Rubber Protective Boot, VX500
17094905	Rubber Protective Boot, T82/T80

PART #	DESCRIPTION
18106831	Nylon Carrying Case, MX6 (supplied w/MX6 diffusion)
18106864	Nylon Carrying Case, MX6/SP6, Aspirated (supplied w/MX6)
18104661	Nylon Carrying Case, iTX (supplied w/iTX)
18104687	Nylon Carrying Case, Combination iTX/iSP
18104679	Nylon Carrying Case, ATX Series
18104240	Nylon Carrying Case, 400 Series
18104109	Nylon Carrying Case, Combination Instrument/SP402
18104042	Nylon Carrying Case, 300 Series and MG140 (supplied w/MG140)
18105478	Nylon Carrying Case, M40
18105486	Nylon Carrying Case, Combination M40/SP40
18106484	Nylon Carrying Case, GasBadge® Pro
18106492	Nylon Carrying Case, 2-unit, GasBadge® Pro
18106401	Nylon Carrying Case, GasBadge® Plus
18106419	(d) Nylon Carrying Case, 2-unit, GasBadge® Plus
18103978	Nylon Carrying Case, T82/T80
18105874	Nylon Carrying Case, T40
18105171	ATX Chest Harness
18103515	Disposable Vinyl HazMat ATX Case
18102335	Disposable Combination 300/400 Series Instrument/Pump Case
18102229	Disposable Vinyl HazMat Belt Case, 300/400 Series
18102177	Optional Handle for Combination Case Instrument/SP402
18102192	WeatherGuard Case w/o External Alarm, iTX, 300/400 Series
18102220	WeatherGuard Case w/External Alarm, iTX, 300/400 Series
18104000	WeatherGuard Case w/o External Alarm ATX Series
18104018	WeatherGuard Case w/External Alarm, ATX Series
17051487	High Impact Carry Case, Dust/Water Tight (Pelican®)
18101840	Instrument and Accessory Case w/Foam Insert, black

SENSOR REFERENCE CHART

INSTRUMENT	OXYGEN (O_2)	%LEL/ METHANE (CH_4)	CARBON MONOXIDE (CO)	CARBON MONOXIDE (H_2 NULL)	HYDROGEN SULFIDE (H_2S)	SULFUR DIOXIDE (SO_2)	CHLORINE (Cl_2)	CHLORINE DIOXIDE (ClO_2)	AMMONIA (NH_3)	NITROGEN DIOXIDE (NO_2)	NITRIC OXIDE (NO)	HYDROGEN CYANIDE (HCN)	HYDROGEN CHLORIDE (HCl)	PHOSPHINE (PH_3)
MX6 iBrid™	17124975-3	17124975-K (Pentane)	17124975-1	17124975-G*	17124975-2	17124975-5	17124975-7	17124975-8	17124975-6	17124975-4	17124975-D	17124975-B	17124975-A	17124975-9
iTX (small)	17101213	17105719	17101064		17101114	17101197	17101247	17101049		17101163	17100892	17100926	17100934	17101023
iTX (big)			17101080	17101072	17101130	17101205			17100900	17101171	17100884			
BM25	6313780	6313969*	6313787		6313788	6313822	6313809	6313841	6313800	6313801	6313802	6313805	6313804	6313810
ATX612	17050129	17050788-ppm	17041880		17041898	17041906	17073271	17074204		17041922				
ATX620	17050129	17050788-ppm	17041880		17041898	17041906	17073271	17074204		17041922				
TMX412	17023516	17041856	17041880		17041898	17041906	17073271	17074204		17041922				
TX418	17050129	N/A	17071143 17041880	17067547	17071176 17041898	17071218 17041906	17071226 17073271	17074931	17071085	17071234 17041922	17071408 17049904	17070046	17066390	
M40	17117730	17050788	17112160		17112152									
MG140	17023516	17050788	17078148		17078148									
LTX312	17023516	17050788-ppm	17041880	17067547	17041898	17041906	17073271	17074204	17071085	17041922	17049904	17077470	17077397	
LTX311	17023516	17041856	17041880	17067547	17041898	17041906	17073271	17074204	17071085	17041922	17049904	17077470	17077397	
LTX310	17023516	17041856	17041880		17041898	17041906	17073271		17049905	17041922	17049904	17050989		
CMX271	17035114	17046269	17028747											
HMX271	17035114	17046269			17022062									
MX251	17035114	17046269												
GasBadge® Pro	17124983-3		17124983-1	17124983-G*	17124983-2	17124983-5	17124983-7	17124983-8	17124983-6	17124983-4	17124983-D	17124983-B		17124983-9
T82	17093766		17060492		17060526	17060534	17060559	17072513		17060542		17072521		17078833
T80	17060484		17060492		17060526	17060534	17060559	17072513		17060542		17072521		17078833
STX70	17049940		17041880		17041898	17041906	17041914		17049905	17041922	17049904	17050989		
LD322		17041856												
HS560					17033960									
200 Series (instrument)	17011925 (OX231)	17070962 (CD211)	17040064 (CO262)		17022062 (HS267)	17030792 (SO261)				17038787 (NO268)				

MX6 also could have:
CO (high): 17124975-H
LEL (Methane): 17124975-L
CO_2 (IR): 17124975-Q
H_2: 17124975-C
CH_4 (0-5%): 17124975-M
PID: 17124975-R
CO/H_2S: 17124975-J
CH_4 (IR): 17124975-N
PH_3 (high): 17124975-E
HC (IR): 17124975-P

iTX also could have:
H_2: 17100967
CO/H_2S: 17101106

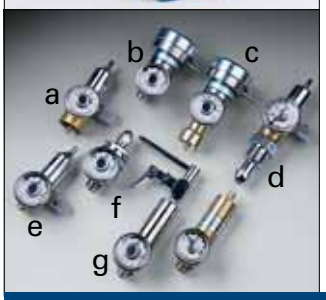
BM25 also could have:
*%LEL: 6313888 (S/N prior to June 08)
H_2: 6313803
PID (Available for Europe, Please call for information)
CO/H_2S: 6313823
ETO: 6313821
CO_2: 6313818
CO (high): 6313826
SiH_4: 6313808
AsH_3: 6313811

GasBadge Pro also could have:
H_2: 17124983-C

T82 also could have:
H_2: 17089947

ATX620, MDU420, CDU440 Infrared (IR) sensors require factory replacement

* Low Hydrogen Interference



For best results, use only Industrial Scientific calibration equipment for regular instrument calibration and maintenance. All Industrial Scientific calibration cylinders are manufactured to the highest quality standards and include NIST traceable blend techniques, analytical leak testing of every cylinder, certified component concentrations and clearly marked lot numbers and expiration dates.

Replacement cylinders are available in a variety of sizes and concentrations for all gases detected by Industrial Scientific instruments. See chart on the following pages for ordering information.

Industrial Scientific Calibration Kits come equipped with everything necessary to keep your gas monitoring instruments operating accurately and reliably. Kits contain certified NIST-traceable (National Institute of Standards & Technology) span gases for safe, reliable instrument calibration. Complete kits are available for all installed sensors and include:

- Convenient Carrying Case
- Non-refillable Cylinders
- Flow Regulator

Regulators provide the proper flow rate for calibrating your Industrial Scientific instrument. Always make certain to use the appropriate regulator for the application as recommended in the Instruction Manual.

(a) 34 L Regulator (1/2 L/min flow)
(b) 58/103 L Demand Flow Regulator
(c) 34 L Demand Flow Regulator
(d) 552 L Regulator (1/2 L/min flow)
(e) 58/103 L Regulator (1/2 L/min flow)
(f) 58/103 L Ammonia Regulator
(g) 58/103 L Bump Test Regulator

REGULATORS

PART #	DESCRIPTION
18100933	(a) 34L Regulator (1/2L/min flow)
18102509	(b) 58/103L Demand Flow Regulator (and 34L Aluminum Cylinders)
18103564	(c) 34L Demand Flow Regulator, CGA 600
18103549	552L Demand Flow Regulator, CGA 590
18103556	650L Demand Flow Regulator, CGA 330
18104158	Demand Flow Regulator, CGA 660
18106708	Demand Flow Regulator, CGA 705
18102260	(d) 552L Regulator (1/2 L/min flow), CGA 590
18100883	(e) 58/103L Regulator (and 34L Aluminum Cylinders) (1/2 L/min flow)
18103580	(g) 58/103L Bump Test Regulator w/Trigger
18103374	650L Regulator (1/2L/min flow), CGA 330
18104695	Regulator w/Bump Test Trigger, CGA 330
18104356	Regulator w/Bump Test Trigger, CGA 590
18105924	5-port Clamp-on Gas Manifold
18105841	58/103/34L Demand Flow Regulator w/iGas Pressure Switch
18105866	34L Demand Flow Regulator, 600 CGA w/iGas Pressure Switch
18105833	552L Demand Flow Regulator, 590 CGA w/iGas Pressure Switch
18105858	650L Demand Flow Regulator, 330 CGA w/iGas Pressure Switch
18106740	Demand Flow Regulator, 660 CGA w/iGas Pressure Switch
18106757	Demand Flow Regulator, 705 CGA w/iGas Pressure Switch
18101776	58/103L Regulator (1 L/min flow)

MISCELLANEOUS CALIBRATION EQUIPMENT

PART #	DESCRIPTION
17041807	Calibration Log, (tablet of 50 sheets)
17050734	Calibration Log, TMX, LTX STX, (tablet of 50 sheets)
17045873	Calibration Label
17050831	Calibration Cup, 300 Series
17042839	Calibration Cup, 400 Series
17059189	Calibration Cup, T82/T80 (not included w/instrument)
17128489	Calibration Cup, MX6 iBrid™
17092339	Calibration Cup, iTX
17108622	Calibration Cup, M40
17124033	Calibration Cup, GasBadge® Plus/Pro
17056326	Bump Cylinder Adapter for CO Breath Sampler
17054578	Calibration Coupling for MDU420, CDU440
17037961	Carrying Case for 2 Cylinders (58/103 L)
18100149	Carrying Case for 2 Cylinders (34 L) w/0.5 LPM Regulator
17124348	Wall/Desk Mount Cylinder Holder
17113275	Cylinder Recycling Tool (58L, 103L)
17113283	Cylinder Recycling Tool (34L)

Industrial Scientific offers a variety of calibration gas cylinders and kits, including convenient multi-gas blends or single gas cylinders. Use the following chart to order complete kits or replacement cylinders. When ordering cylinders, the shaded areas indicate compatible regulators (see complete regulator descriptions on page 2•8), while the • identifies which regulator is included in the associated kit. See "Notes" for supplementary information.

PART #	DESCRIPTION	0.5LPM Regulator 18100883	0.5LPM Regulator 18100933	Demand Flow Regulator 18102509	Demand Flow Regulator 18103564	Demand Flow Regulator w/ iGas Pressure Switch 18105841	Demand Flow Regulator w/ iGas Pressure Switch 18105866	VOL.	NOTES
18103937	CYL, 100 ppm CO, 25 ppm H_2S, 19% O_2, 25% LEL Pentane							34L	aluminum
18102187	CYL, 100 ppm CO, 25 ppm H_2S, 19% O_2, 25% LEL Pentane							58L	
18102189	KIT	•							
18103432	KIT			•					
18102343	CYL, 200 ppm CO, 25 ppm H_2S, 19% O_2, 25% LEL Pentane							58L	
18102242	CYL, 100 ppm CO, 25 ppm H_2S, 19% O_2, 2.5% Methane							58L	
18102275	KIT	•							
18105262	CYL, 50 ppm CO, 25 ppm H_2S, 20.9% O_2, 50% LEL Methane							58L	
18108035	CYL, 250 ppm CO, 25 ppm H_2S, 19% O2, 50% LEL Methane							58 L	
18105825	CYL, 200 ppm CO, 75 ppm H_2S, 15% O_2, 25% LEL Methane							11L	aerosol
18105536	CYL, 100 ppm CO, 25 ppm H_2S, 19% O_2, 50% LEL Methane							34L	aluminum
18105635	CYL, 100 ppm CO, 50 ppm H_2S, 16% O_2, 50% LEL Methane	18103580						34L	Bump Gas - 2 yr.
18106179	CYL, 100 ppm CO, 25 ppm H_2S, 19% O_2, 50% LEL Propane							58L	
18102186	CYL, 25 ppm H_2S, 19% O_2, 25% LEL Pentane							58L	
18102188	KIT	•							
18102241	CYL, 25 ppm H_2S, 19% O_2, 2.5% Methane							58L	
18102274	KIT	•							
18104331	CYL, 25 ppm H_2S, 19% O_2, 40% LEL Methane							58L	
18103143	CYL, 50 ppm H_2S, 16% O_2, 50% LEL Methane	18103580						58L	Bump Gas - 2 yr.
18102764	CYL, 25 ppm H_2S, 19% O_2, 50% LEL Propane							58L	
18104448	CYL, 50 ppm CO, 19% O_2, 25% LEL Pentane							34L	w/CGA 600 fitting
18104463	CYL, 50 ppm CO, 19% O_2, 25% LEL Pentane							103L	
18104455	CYL, 50 ppm CO, 19% O_2, 50% LEL Pentane							103L	
18101576	CYL, 100 ppm CO, 19% O_2, 25% LEL Pentane							103L	
18101568	KIT	•							w/103L Zero Air
18102269	KIT	•							
18101253	CYL, 100 ppm CO, 19% O_2, 25% LEL Pentane							34L	w/CGA 600 fitting
18101295	KIT		•						w/34L Zero Ai
18105676	CYL, 100 ppm CO, 15% O_2, 25% LEL Pentane							103L	
18102324	CYL, 250 ppm CO, 19% O_2, 25% LEL Pentane							103L	
18102243	CYL, 50 ppm CO, 19% O_2, 2.5% Methane							103L	
18102165	CYL, 100 ppm CO, 19% O_2, 2.5% Methane							103L	
18102270	KIT	•							
18101246	CYL, 100 ppm CO, 19% O_2, 2.5% Methane							34L	w/CGA 600 fitting
18101287	KIT		•						w/34L Zero Air
18107847	CYL, 100 ppm CO, 19% O_2, 2.0% Methane							103L	
18105122	CYL, 50 ppm CO, 18% O_2, 50% LEL Propane							103L	
18101238	CYL, 19% O_2, 25% LEL Pentane							103L	
18101279	KIT 19% O_2, 25% LEL Pentane, 25 ppm H_2S, 103L	•							w/18100859 (58L)
18107995	CYL, 100 ppm CO, 2.5% CO_2, 25 ppm H_2S, 19% O_2, 25% LEL Pentane							58L	
18103473	CYL, 100 ppm CO, 2.5% CO_2, 19% O_2, 25% LEL Pentane							103L	
18103317	KIT			•					w/103L Zero Air
18104521	CYL, 100 ppm CO, 5% CO_2, 19% O_2, 25% LEL Pentane							103L	
18104539	KIT			•					w/103L Zero Air
18106799	CYL, 25 ppm H_2S, 5 ppm SO_2, 19% O_2, 25% LEL Pentane							58L	
18106807	CYL, 25 ppm H_2S, 5 ppm SO_2, 19% O_2, 25% LEL Methane							58L	
18106914	CYL, 25 ppm H_2S, 50 ppm CO, 18% O_2, 32.4% LEL Methane							58L	
18106773	CYL, 100 ppm CO, 5 ppm NO_2, 19% O_2, 25% LEL Pentane							58L	
18106781	CYL, 100 ppm CO, 5 ppm NO_2, 19% O_2, 25% LEL Methane							58L	
18108571	CYL, 100 ppm CO, 5 ppm NO_2, 19% O_2, 2.5% LEL Methane							58L	
18108548	CYL, 100 ppm CO, 2.5 % CO_2, 19% O_2, 2.5% LEL Methane							103L	
18105593	CYL, 25 ppm Ammonia							34L	aluminum
18102151	CYL, 25 ppm Ammonia							58L	
18102147	KIT	•							
18105692	CYL, 5 ppm Benzene							34L	w/CGA 600 fitting
18105734	CYL, 5 ppm Benzene							103L	
18105700	CYL, 5 ppm Butadiene							34L	w/CGA 600 fitting

NOTE: Calibration gas cylinder expiration times vary due to gas type. Please contact Industrial Scientific for detailed information.

PART #	DESCRIPTION	0.5LPM Regulator 18100883	0.5LPM Regulator 18100933	Demand Flow Regulator 18102509	Demand Flow Regulator 18103564	Demand Flow Regulator w/ iGas Pressure Switch 18105841	Demand Flow Regulator w/ iGas Pressure Switch 18105866	VOL.	NOTES
18105767	CYL, 5 ppm Butadiene*							103L	
18106146	CYL, 300 ppm Carbon Dioxide							103L	
18106153	CYL, 1,000 ppm Carbon Dioxide							103L	
18102913	CYL, 2.5% Carbon Dioxide							103L	
18108118	CYL, 3% Carbon Dioxide							103L	
18103218	CYL, 5.0% Carbon Dioxide							34L	w/CGA 600 fitting
18103275	KIT				•				w/34L Zero Air
18104208	CYL, 5.0% Carbon Dioxide							103L	
18101493	CYL, 25 ppm Carbon Monoxide							34L	w/CGA 600 fitting
18106005	CYL, 25 ppm Carbon Monoxide							103L	
18100719	CYL, 50 ppm Carbon Monoxide							34L	w/CGA 600 fitting
18100750	KIT		•						w/34L Zero Air
18102230	CYL, 50 ppm Carbon Monoxide							103L	
18102665	CYL, 100 ppm Carbon Monoxide*(bump gas)							11L	aerosol
18100701	CYL, 100 ppm Carbon Monoxide							34L	w/CGA 600 fitting
18100743	KIT		•						w/34L Zero Air
18102163	CYL, 100 ppm Carbon Monoxide							103L	
18102162	KIT	•							
18102301	CYL, 125 ppm Carbon Monoxide							103L	
18101352	CYL, 200 ppm Carbon Monoxide							34L	w/CGA 600 fitting
18102302	CYL, 250 ppm Carbon Monoxide							103L	
18101063	CYL, 300 ppm Carbon Monoxide							34L	w/CGA 600 fitting
18102303	CYL, 500 ppm Carbon Monoxide							103L	
18102806	CYL, 2 ppm Chlorine							58L	
18103697	CYL, 5 ppm Chlorine							58L	
18105007	CYL, 10 ppm Chlorine							34L	aluminum
18101758	CYL, 10 ppm Chlorine							58L	
18101741	KIT	•							
18103127	CYL, 25% LEL Hexane							103L	
18102249	CYL, 40% LEL Hexane							34L	w/CGA 600 fitting
18107987	CYL, 500 ppm Hexane							103L	
18100453	CYL, 25% LEL Hydrogen							34L	w/CGA 600 fitting
18100461	CYL, 50% LEL Hydrogen							34L	w/CGA 600 fitting
18103481	CYL, 50% LEL Hydrogen							103L	
18102905	CYL, 50 ppm Hydrogen							34L	w/CGA 600 fitting
18103945	CYL, 100 ppm Hydrogen							34L	w/CGA 600 fitting
18102996	CYL, 500 ppm Hydrogen							103L	
18103010	CYL, 1,000 ppm Hydrogen							103L	
18102154	CYL, 10 ppm Hydrogen Chloride							58L	
18102148	KIT	•							
18102152	CYL, 10 ppm Hydrogen Cyanide							58L	
18102149	KIT	•							
18102970	CYL, 10 ppm Hydrogen Sulfide							58L	
18104984	CYL, 25 ppm Hydrogen Sulfide							34L	aluminum
18100859	CYL, 25 ppm Hydrogen Sulfide							58L	
18100842	KIT	•							
18102988	CYL, 40 ppm Hydrogen Sulfide							58L	
18102245	CYL, 50 ppm Hydrogen Sulfide							58L	
18102304	CYL, 125 ppm Hydrogen Sulfide							58L	
18105809	CYL, 10 ppm Isobutylene							103L	
18106591	CYL, 100 ppm Isobutylene							34L	w/CGA 600 fitting
18102939	CYL, 100 ppm Isobutylene							103L	
18104554	CYL, 500 ppm Isobutylene							103L	
18100206	CYL, 1% Methane							34L	w/CGA 600 fitting
18108001	CYL, 2.0% Methane							103L	
18107284	CYL, 2.0% Methane							34L	
18100214	CYL, 2.5% Methane							34L	
18101303	KIT		•						
18101378	CYL, 2.5% Methane							103L	
18102312	CYL, 99% Methane							34L	w/CGA 600 fitting
18102491	KIT				•				
18104778	CYL, 99% Methane							34L	aluminum

NOTE: Calibration gas cylinder expiration times vary due to gas type. Please contact Industrial Scientific for detailed information.

PART #	DESCRIPTION	0.5LPM Regulator 18100883	0.5LPM Regulator 18100933	Demand Flow Regulator 18102509	Demand Flow Regulator 18103564	Demand Flow Regulator w/ iGas Pressure Switch 18105841	Demand Flow Regulator w/ iGas Pressure Switch 18105866	VOL.	NOTES
18105114	CYL, 10% LEL Methane		■		■		■	34L	w/CGA 600 fitting
18105098	CYL, 500 ppm Methane		■		■		■	34L	w/CGA 600 fitting
18105106	CYL, 1,000 ppm Methane		■		■		■	34L	w/CGA 600 fitting
18102244	CYL, 100% Nitrogen	■		■		■		103L	
18102248	CYL, 100% Nitrogen		■		■		■	34L	w/CGA 600 fitting
18105585	CYL, 1 ppm Nitrogen Dioxide	■		■		■		34L	aluminum
18102897	CYL, 2 ppm Nitrogen Dioxide	■		■		■		58L	
18104976	CYL, 5 ppm Nitrogen Dioxide	■		■		■		34L	aluminum
18102219	CYL, 5 ppm Nitrogen Dioxide	■		■		■		58L	
18102238	KIT	•							
18106252	CYL, 10 ppm Nitrogen Dioxide	■		■		■		58L	
18105452	CYL, 25 ppm Nitrogen Dioxide	■		■		■		34L	aluminum
18101477	CYL, 25 ppm Nitrogen Dioxide	■		■		■		58L	
18101469	KIT	•							
18102153	CYL, 25 ppm Nitric Oxide	■		■		■		58L	
18102150	KIT	•							
18100289	CYL, 19% Oxygen		■		■		■	34L	w/CGA 600 fitting
18100271	CYL, 20.9% Oxygen		■		■		■	34L	w/CGA 600 fitting
18102234	CYL, 12% LEL Pentane	■		■		■		103L	
18101162	CYL, 25% LEL Pentane		■		■		■	34L	w/CGA 600 fitting
18101261	KIT		•						2 cylinders
18104398	CYL, 1.0 ppm Phosphine	■		■		■		34L	aluminum
18104059	CYL, 1.0 ppm Phosphine	■		■		■		58L	
18107797	Cyl., 5 PPM Phosphine	■		■		■		58L	
18107805	Cyl., 5 PPM Phosphine	■		■		■		34L	
18100164	CYL, 25% LEL Propane		■		■		■	34L	w/CGA 600 fitting
18103762	CYL, 25% LEL Propane	■		■		■		103L	
18100172	CYL, 50% LEL Propane		■		■		■	34L	w/CGA 600 fitting
18104992	CYL, 5 ppm Sulfur Dioxide	■		■		■		34L	aluminum
18102222	CYL, 5 ppm Sulfur Dioxide	■		■		■		58L	
18102239	KIT	•							
18101220	CYL, 10 ppm Sulfur Dioxide	■		■		■		58L	
18101212	KIT	•							
18105726	CYL, 100 ppm Tolulene		■		■		■	34L	w/CGA 600 fitting
18100693	CYL, Zero Grade Air (20.9% Oxygen)		■		■		■	34L	w/CGA 600 fitting
18101584	CYL, Zero Grade Air (20.9% Oxygen)	■		■		■		103L	

PART #	DESCRIPTION	0.5LPM Regulator 18102260	0.5LPM Regulator 18103374	Demand Flow Regulator 18103549	Demand Flow Regulator 18103556	Demand Flow Regulator w/iGas Pressure Switch 18105833	Demand Flow Regulator w/iGas Pressure Switch 18105858	Demand Flow Regulator w/iGas Pressure Switch 18106740	VOL.	NOTES
18108019	CYL, 250 ppm CO, 25 ppm H_2S, 19% O_2, 50% LEL Methane		■		■		■		650L	w/CGA 330 fitting
18103366	CYL, 100 ppm CO, 25 ppm H_2S, 19% O_2, 25% LEL Pentane		■		■		■		650L	w/CGA 330 fitting
18108050	CYL, 100 ppm CO, 25 ppm H_2S, 19% O_2, 2% Methane		■		■		■		650L	w/CGA 330 fitting
18104091	CYL, 100 ppm CO, 25 ppm H_2S, 19% O_2, 2.5% Methane		■		■		■		650L	w/CGA 330 fitting
18108303	CYL, 100 ppm CO, 5 ppm NO_2, 19% O_2, 2.5% Methane		■		■		■		650L	w/CGA 330 fitting
18107219	CYL, 100 ppm CO, 25 ppm H_2S, 19% O_2, 25% LEL Propane		■		■		■		650L	w/CGA 330 fitting
18107227	CYL, 25 ppm H_2S, 19% O_2, 25% LEL Pentane		■		■		■		650L	w/CGA 330 fitting
18102258	CYL, 100 ppm CO, 19% O_2, 25% LEL Pentane	■		■		■			552L	w/CGA 590 fitting
18102259	CYL, 100 ppm CO, 19% O_2, 2.5% Methane	■		■		■			552L	w/CGA 590 fitting
18104265	CYL, 250 ppm CO, 19% O_2, 2.5% Methane	■		■		■			552L	w/CGA 590 fitting
18103671	CYL, 100 ppm CO, 2.5% CO_2, 19% O_2, 25% LEL Pentane	■		■		■			552L	w/CGA 590 fitting
18106963	CYL, 10 ppm Hydrogen Chloride		■		■		■		650L	w/CGA 330 fitting
18106633	CYL, 25 ppm Hydrogen Sulfide		■		■		■		650L	w/CGA 330 fitting
18103101	CYL, 100 ppm Carbon Monoxide	■		■		■			552L	w/CGA 590 fitting
18104125	CYL, 250 ppm Carbon Monoxide	■		■		■			552L	w/CGA 590 fitting
18106955	CYL, 10 ppm Chlorine		■		■		■		650L	w/CGA 330 fitting
18102320	CYL, Zero Grade Air (20.9% Oxygen)	■		■		■			552L	w/CGA 590 fitting
18107375	CYL, 100 ppm Isobutylene	■		■		■			552L	w/CGA 590 fitting
18107292	CYL, 100 ppm Isobutylene	■		■		■			34L	aluminum
18106658	CYL, 25 ppm NH_3							■	650L	w/CGA 660 fitting
18107722	CYL, 25 ppm NO							■	650L	w/CGA 660 fitting
18107730	CYL, 25 ppm NO_2							■	650L	w/CGA 660 fitting
18105817	CYL, 10 ppm SO_2							■	650L	w/CGA 660 fitting

NOTE: Calibration gas cylinder expiration times vary due to gas type. Please contact Industrial Scientific for detailed information.

At Industrial Scientific, we know that no two working environments are the same. Loud or quiet. Hot or cold. Indoors or outdoors. Confined space or open field. No matter what the working environment, it's absolutely essential that our customers have the tools to best adapt to their specific situations. Industrial Scientific accessories are designed to meet the individual needs of each user, and enable them to operate with confidence.

Industrial Scientific's external alarms provide additional protection in high-noise work environments.
External Alarms:
(a) Audible/Visual Latching External Alarm (103 dB)
(b) Audible/Visual External Alarm (90 dB)

Many instrument models from Industrial Scientific offer datalogging as an option. The datalogging feature expands the functionality of the instrument with the ability to store or log the recorded gas readings. The stored data can then be used to calculate exposures during a work shift, record peak gas readings, or simply identify instrument usage patterns. Datalogging Kits include appropriate software, connecting cables and information for using the datalogging functions and retrieving stored data.

EXTERNAL ALARMS

PART #	DESCRIPTION
18103747	(a) 103 dB Latching External Alarm for iTX/VX500/600, 400/300/200 Series (except OX231)
18101154	(b) 90 dB External Alarm for 600/400/300/200 Series (except OX231)
18101394	External Alarm Extension Cable, 6.1 m (20')
18101600	External Alarm Extension Cable, 15.25 m (50')
18101618	External Alarm Extension Cable, 30.5 m (100')

DATALOGGING EQUIPMENT

PART #	DESCRIPTION
18107086	MX6 iBrid™ Datalink – Software included
18107094	MX6 iBrid™ Battery Charger/Datalink, universal – Software included
18104786	iTX/ VX500 Datalogging Kit – Software included (included w/18104737/18104414)
18106260	GasBadge® Datalink – Software included
18104281	T82 Datalink/ Datalogging Kit – Software included
18105528	(c) M40 Datalink – Software included
18103069	ATX Datalogging Kit (Software & Cable) – Software included

PRINTERS

PART #	DESCRIPTION
17117722	Serial data dot matrix printer for M•Cal/Cal Plus – 120-230 VAC powered

INSTRUMENT MAINTENANCE TOOLS

PART #	DESCRIPTION
17095746	MX6/iTX/VX500 Maintenance Tool
17042946	400/300 Series Maintenance Tool
17050278	LD322 Maintenance Tool
17049891	STX70 Maintenance Tool
17003567	200 Series, T82/T80 Maintenance Tool
17063256	ATX Series Maintenance Tool

At Industrial Scientific, our products are always application-driven, solution-oriented. Whether for a single application, or to encompass multiple rooms and areas, our fixed-point monitoring solutions are developed to meet the individual needs of our customers. In fact, when you contact us for information about our fixed systems, chances are we'll ask you a lot more questions than you'll ask us.

What gases do you need to monitor? What other background gases may be present in the area you are monitoring? What is the size of the area being monitored? Where do you expect to experience a problem? What is the typical air flow direction in the area to be monitored?

At Industrial Scientific, application oriented solutions are our goal for every product we sell. Need the best solution for your application? Call 1-412-788-4353. Our customer service representatives will take the time to answer all your questions … and ask the right ones.

iTrans™ Single or Dual Gas Monitor

SPECIFICATIONS

ENCLOSURE:
Cast aluminum, poly-bonded coating, explosion-proof, NEMA 7X, IP66 rating

SENSORS:
Combustible Gases – Catalytic bead and/or Non-Dispersive Infrared (NDIR)
Oxygen and Toxic Gases – Electrochemical diffusion

MEASURING RANGES:
Combustible Gases – 0 to 100% LEL in 1% increments
Hydrogen – 0 to 999 ppm in 1 ppm increments
Oxygen – 0 to 30% by volume in 0.1% increments
Ammonia – 0 to 200 ppm in 1 ppm increments
Carbon Monoxide – 0 to 999 ppm in 1 ppm increments
Hydrogen Sulfide – 0 to 500 ppm in 1 ppm increments
Sulfur Dioxide – 0.2 to 99.9 ppm in 0.1 ppm increments
Hydrogen Cyanide – 0.2 to 30 ppm in 0.1 ppm increments
Hydrogen Chloride – 0.2 to 30 ppm in 0.1 ppm increments
Phosphine – 0 to 1 ppm in 0.01 ppm increments
Nitrogen Dioxide – 0.2 to 99.9 ppm in 0.1 ppm increments
Nitric Oxide – 0 to 999 ppm in 1 ppm increments
Chlorine – 0.2 to 99.9 ppm in 0.1 ppm increments
Chlorine Dioxide – 0.02 to 2 ppm in 0.01 ppm increments

DISPLAY:
Dual-channel split-screen LED display (4 digit, 7-segment ea.)

INPUT VOLTAGE:
12-28 VDC operating range (24 VDC typical)

INPUT CURRENT (MAX, SINGLE GAS UNLESS NOTED):
Toxic Gases or Oxygen – 150 mA at 24 VDC
Combustible Gases (catalytic) – 175 mA at 24 VDC, 0.6 A peak
Combustible Gases (infrared) – 150 mA at 24 VDC, 0.6 A peak
Combined catalytic/infrared – 280 mA at 24 VDC (two gas)

APPROVALS

NRTL/c and CSA – Class I, Div. 1, 2, Groups B, C, D; AEx d IIB + H2
ATEX – Ex d IIB + H2 T5 (sensor-specific)
IEC – Ex d IIB + H2 T5 (sensor-specific)
China – GB 3836. 1-Ex d IIC T4; LEL version GB15322-94 Fire protection

The iTrans™ fixed-point gas monitor provides one or two points of detection from a single head for maximum flexibility, superior performance and lower installation costs. The three or four wire system allows gas sensors to be mounted on-board or remotely up to 200 meters away, and can accommodate more than 200 transmitters in RS485 bus configuration. Our industry-proven "smart" sensor technology allows iTrans to monitor a wide range of gases for specific applications. Safety features include zero and cal fault protection, and access code security – all enclosed within an explosion-proof aluminum housing.

The microprocessor-controlled transmitters can operate independently or in a multi-point configuration, transmitting a 4-20mA signal or ModBus RTU digital output to any control device or PLC. iTrans can also work in a stand-alone mode with optional on-board relays. When gas concentrations exceed pre-set limits, the unit can activate alarms, horns, and fans; or shut down systems without being wired back to a central control panel.

iTrans™ Monitors offers a wide variety of sensor configurations and relay options for maximum flexibility and affordability. Use the following guide to select the options that best fit your monitoring needs and applications. Industrial Scientific recommends that a fixed system application survey be completed to help provide the most accurate assessment of your equipment requirements.

iTrans Base Part Number: **7814635-ABCDEFG (sensor options as listed below).**
Dual reading LED display, magnetic calibration tool, and calibration cup are standard items with all iTrans monitors.

Ordering example: An iTrans with an on-board LEL (4-20 mA scale 0-100) and remote mount H_2S (4-20 mA scale 0-500) with optional relays would have a part number of **7814635-1C21241**

iTRANS™ PART NUMBER/ORDERING MATRIX

A-SENSOR 1 CONFIGURATION
1 - Explosion-proof/On-Board
2 - Explosion-proof/Remote *(max. distance = 200m)*
3 - Non-Hazardous Remote/Duct Mount
4 - Explosion-proof/On-Board With Splash Guard
5 - Explosion-proof/Remote With Splash Guard
(max. distance = 200m)

B-GAS SENSOR 1
1 - Carbon Monoxide (CO)
2 - Nitric Oxide (NO)
3 - Ammonia (NH_3)
4 - Hydrogen Sulfide (H_2S)
5 - Sulfur Dioxide (SO_2)
6 - Nitrogen Dioxide (NO_2)
7 - Chlorine (Cl_2)
8 - Chlorine Dioxide (ClO_2)
9 - Hydrogen Cyanide (HCN)
A - Oxygen (O_2)
B - LEL Infrared *(factory methane calibration)*
C - LEL Catalytic Plug-In *(factory pentane calibration)*
D - Carbon Monoxide-Hydrogen Null (CO-H_2)
F - Hydrogen Chloride (HCl)
G - LEL Infrared Propane
K - Phosphine (PH_3)
L - Hydrogen (H_2)

C-4-20 mA OUTPUT SCALE FOR SENSOR 1
0 - 0-999
1 - 0-500
2 - 0-100
3 - 0-50
4 - 0-30
5 - 0-10
6 - 0-2
7 - 0-1
8 - 0-20
9 - 0-200

D-OPTIONAL ON-BOARD RELAYS
0 - No Relay Modules
1 - With On-Board Relays

E-SENSOR 2 CONFIGURATION
0 - No Sensor
1 - Explosion-proof/On-Board
2 - Explosion-proof/Remote *(max. distance = 200m)*
3 - Non-Hazardous Remote/Duct Mount
4 - Explosion-proof/On-Board With Splash Guard
5 - Explosion-proof/Remote With Splash Guard
(max. distance = 200m)

F-GAS SENSOR 2 (Required only for dual sensor version)
1 - Carbon Monoxide (CO)
2 - Nitric Oxide (NO)
3 - Ammonia (NH_3)
4 - Hydrogen Sulfide (H_2S)
5 - Sulfur Dioxide (SO_2)
6 - Nitrogen Dioxide (NO_2)
7 - Chlorine (Cl_2)
8 - Chlorine Dioxide (ClO_2)
9 - Hydrogen Cyanide (HCN)
A - Oxygen (O_2)
B - LEL Infrared *(factory methane calibration)*
C - LEL Catalytic Plug-In *(factory pentane calibration)*
D - Carbon Monoxide-Hydrogen Null (CO-H_2)
F - Hydrogen Chloride (HCl)
G - LEL Infrared Propane
K - Phosphine (PH_3)
L - Hydrogen (H_2)

G-4-20 mA OUTPUT SCALE FOR SENSOR 2
(Required only for dual sensor version)
0 - 0-999
1 - 0-500
2 - 0-100
3 - 0-50
4 - 0-30
5 - 0-10
6 - 0-2
7 - 0-1
8 - 0-20
9 - 0-200

COMMON CONFIGURATIONS

PART #	DESCRIPTION
7814635-1G200	iTrans, On-Board IR LEL, No Relays
7814635-11910	iTrans, On-Board CO, w/Relays
7814635-13110	iTrans, On-Board NH_3, w/Relays

PART #	DESCRIPTION
7814635-1G201A4	iTrans Dual Unit, On-Board IR LEL & O_2, No Relays
7814635-23902C2	iTrans Dual Unit, Remote NH_3 & Remote LEL Catalytic, No Relays

Consult factory for availability, additional gases, ranges and certification information. Subject to change without notice.

Stainless Steel iTrans™ Fixed Monitor

iTrans™
Fixed-Point Monitors

- **Extremely corrosion resistant 316 stainless steel housing**
- **Low cost fixed-point monitors with choice of sensor options**
- **Unique dual sensor platform (on-board & remote placement)**
- **4-20 mA and ModBus RTU interface for direct communication to any control device or PLC**
- **Highly visible, split-screen LED display**

SPECIFICATIONS

ENCLOSURE:
316 Stainless Steel, explosion-proof, NEMA 7X, IP66 rating

SENSORS:
Combustible Gases – Catalytic bead and/or
Non-Dispersive Infrared (NDIR)
Oxygen and Toxic Gases – Electrochemical diffusion

MEASURING RANGES:
Combustible Gases – 0 to 100% LEL in 1% increments
Hydrogen – 0 to 999 ppm in 1 ppm increments
Oxygen – 0 to 30% by volume in 0.1% increments
Ammonia – 0 to 200 ppm in 1 ppm increments
Carbon Monoxide – 0 to 999 ppm in 1 ppm increments
Hydrogen Sulfide – 0 to 500 ppm in 1 ppm increments
Sulfur Dioxide – 0.2 to 99.9 ppm in 0.1 ppm increments
Hydrogen Cyanide – 0.2 to 30 ppm in 0.1 ppm increments
Hydrogen Chloride – 0.2 to 30 ppm in 0.1 ppm increments
Phosphine – 0 to 1 ppm in 0.01 ppm increments
Nitrogen Dioxide – 0.2 to 99.9 ppm in 0.1 ppm increments
Nitric Oxide – 0 to 999 ppm in 1 ppm increments
Chlorine – 0.2 to 99.9 ppm in 0.1 ppm increments
Chlorine Dioxide – 0.02 to 2 ppm in 0.01 ppm increments

DISPLAY:
Dual-channel split-screen LED display (4 digit, 7-segment ea.)

INPUT VOLTAGE:
12-28 VDC operating range (24 VDC typical)

INPUT CURRENT (MAX, SINGLE GAS UNLESS NOTED):
Toxic Gases or Oxygen – 150 mA at 24 VDC
Combustible Gases (catalytic) – 175 mA at 24 VDC, 0.6 A peak
Combustible Gases (infrared) – 150 mA at 24 VDC, 0.6 A peak
Combined catalytic/infrared – 280 mA at 24 VDC (two gas)

APPROVALS

NRTL/c and CSA – Class I, Div. 1, 2, Groups B, C, D; AEx d IIB + H2
ATEX – Ex d IIB + H2 T5 (sensor-specific)
IEC – Ex d IIB + H2 T5 (sensor-specific)
China – GB 3836. 1-Ex d IIC T4; LEL version GB15322-94 Fire protection

Enclosed within an explosion-proof stainless steel housing, the Stainless Steel iTrans™ is built to withstand corrosion in harsh environments such as offshore drilling platforms, chemical plants or applications near a saltwater coastline.

iTrans™ fixed-point gas monitors provide one or two points of detection from a single head for maximum flexibility, superior performance and lower installation costs. The three or four wire system allows gas sensors to be mounted on-board or remotely up to 200 meters away, and can accommodate more than 200 transmitters in RS485 bus configuration. Our industry-proven "smart" sensor technology allows iTrans to monitor a wide range of gases for specific applications. Safety features include zero and cal fault protection, and access code security.

The microprocessor-controlled transmitters can operate independently or in a multi-point configuration, transmitting a 4-20mA signal or ModBus RTU digital output to any control device or PLC. iTrans can also work in a stand-alone mode with optional on-board relays. When gas concentrations exceed pre-set limits, the unit can activate alarms, horns, and fans; or shut down systems without being wired back to a central control panel.

iTrans™ Stainless Steel Monitors offers a wide variety of sensor configurations and relay options for maximum flexibility and affordability. Use the following guide to select the options that best fit your monitoring needs and applications. Industrial Scientific recommends that a fixed system application survey be completed to help provide the most accurate assessment of your equipment requirements.

iTrans Base Part Number: **7814635-ABCDEFG (sensor options as listed below).**
Dual reading LED display, magnetic calibration tool, and calibration cup are standard items with all iTrans monitors.

Ordering example: An iTrans with an on-board LEL (4-20 mA scale 0-100) and remote mount H_2S (4-20 mA scale 0-500) with optional relays would have a part number of **7814635-6C21741**

STAINLESS STEEL iTRANS™ PART NUMBER/ORDERING MATRIX

A-SENSOR 1 CONFIGURATION
6 - XP 316 Stainless Steel/On-Board
7 - XP 316 Stainless Steel/Remote
(max. distance = 200m)

B-GAS SENSOR 1
1 - Carbon Monoxide (CO)
2 - Nitric Oxide (NO)
3 - Ammonia (NH_3)
4 - Hydrogen Sulfide (H_2S)
5 - Sulfur Dioxide (SO_2)
6 - Nitrogen Dioxide (NO_2)
7 - Chlorine (Cl_2)
8 - Chlorine Dioxide (ClO_2)
9 - Hydrogen Cyanide (HCN)
A - Oxygen (O_2)
B - LEL Infrared *(factory methane calibration)*
C - LEL Catalytic Plug-In *(factory pentane calibration)*
D - Carbon Monoxide-Hydrogen Null (CO-H_2)
F - Hydrogen Chloride (HCl)
G - LEL Infrared Propane
K - Phosphine (PH_3)
L - Hydrogen (H_2)

C-4-20 mA OUTPUT SCALE FOR SENSOR 1
0 - 0-999
1 - 0-500
2 - 0-100
3 - 0-50
4 - 0-30
5 - 0-10
6 - 0-2
7 - 0-1
8 - 0-20
9 - 0-200

D-OPTIONAL ON-BOARD RELAYS
0 - No Relay Modules
1 - With On-Board Relays

E-SENSOR 2 CONFIGURATION
0 - No Sensor
7 - XP 316 Stainless Steel/Remote
(max. distance = 200m)

F-GAS SENSOR 2 (Required only for dual sensor version)
1 - Carbon Monoxide (CO)
2 - Nitric Oxide (NO)
3 - Ammonia (NH_3)
4 - Hydrogen Sulfide (H_2S)
5 - Sulfur Dioxide (SO_2)
6 - Nitrogen Dioxide (NO_2)
7 - Chlorine (Cl_2)
8 - Chlorine Dioxide (ClO_2)
9 - Hydrogen Cyanide (HCN)
A - Oxygen (O_2)
B - LEL Infrared *(factory methane calibration)*
C - LEL Catalytic Plug-In *(factory pentane calibration)*
D - Carbon Monoxide-Hydrogen Null (CO-H_2)
F - Hydrogen Chloride (HCl)
G - LEL Infrared Propane
K - Phosphine (PH_3)
L - Hydrogen (H_2)

G-4-20 mA OUTPUT SCALE FOR SENSOR 2
(Required only for dual sensor version)
0 - 0-999
1 - 0-500
2 - 0-100
3 - 0-50
4 - 0-30
5 - 0-10
6 - 0-2
7 - 0-1
8 - 0-20
9 - 0-200

COMMON CONFIGURATIONS

PART #	DESCRIPTION
7814635-6C21741	Stainless Steel iTrans, On-Board LEL & Remote H_2S, With Relays
7814635-6C210	Stainless Steel iTrans, On-Board LEL, w/Relays
7814635-6G200	Stainless Steel iTrans, On-Board IR LEL, No Relays
7814635-61010	Stainless Steel iTrans, On-Board CO, w/Relays

PART #	DESCRIPTION
7814635-64110	Stainless Steel iTrans, On-Board H_2S, w/Relays
7814635-7C21741	Stainless Steel iTrans, Remote LEL and Remote H_2S, With Relays
7814635-63910	Stainless Steel iTrans, On-Board NH_3, w/Relays
7814635-73207C2	Stainless Steel iTrans, Remote NH_3 & Remote LEL Catalytic, No Relays

Consult factory for availability, additional gases, ranges and certification information. Subject to change without notice.

Stand-Alone iTrans™ Fixed Monitor

iTrans™
Fixed-Point Monitors

- Mounted audible and visual alarm
- Low cost fixed-point monitors with choice of sensor options
- 4-20 mA and ModBus RTU interface for direct communication to any control device or PLC
- Highly visible, split-screen LED display

Remote-mount sensor configuration

SPECIFICATIONS

ENCLOSURE:
Cast aluminum, poly-bonded coating, NEMA 4X, IP66 rating

ALARMS:
105 dB audible alarm
Ultra-bright flashing beacon

SENSORS:
Combustible Gases – Catalytic bead and/or Non-Dispersive Infrared (NDIR)
Oxygen and Toxic Gases – Electrochemical diffusion

MEASURING RANGES:
Combustible Gases – 0 to 100% LEL in 1% increments
Hydrogen – 0 to 999 ppm in 1 ppm increments
Oxygen – 0 to 30% by volume in 0.1% increments
Ammonia – 0 to 200 ppm in 1 ppm increments
Carbon Monoxide – 0 to 999 ppm in 1 ppm increments
Hydrogen Sulfide – 0 to 500 ppm in 1 ppm increments
Sulfur Dioxide – 0.2 to 99.9 ppm in 0.1 ppm increments
Hydrogen Cyanide – 0.2 to 30 ppm in 0.1 ppm increments
Hydrogen Chloride – 0.2 to 30 ppm in 0.1 ppm increments
Phosphine – 0 to 1 ppm in 0.01 ppm increments
Nitrogen Dioxide – 0.2 to 99.9 ppm in 0.1 ppm increments
Nitric Oxide – 0 to 999 ppm in 1 ppm increments
Chlorine – 0.2 to 99.9 ppm in 0.1 ppm increments
Chlorine Dioxide – 0.02 to 2 ppm in 0.01 ppm increments

DISPLAY:
Dual-channel split-screen LED display (4 digit, 7-segment ea.)

INPUT VOLTAGE:
12-28 VDC operating range (24 VDC typical)

INPUT CURRENT (MAX, SINGLE GAS UNLESS NOTED):
Toxic Gases or Oxygen – 150 mA at 24 VDC
Combustible Gases (catalytic) – 175 mA at 24 VDC, 0.6 A peak
Combustible Gases (infrared) – 150 mA at 24 VDC, 0.6 A peak
Combined catalytic/infrared – 280 mA @ 24 VDC (two gas)

iTrans™ is also available as a complete stand-alone fixed system. Its audible and visual alarm are mounted directly to the iTrans™ and wired to the low and high alarm relays. Different audible tones distinguish between low and high alarms while the ultra-bright strobe and LED display alert workers that a gas hazard is present. An optional 24 VDC power supply can be added to create a complete plug-in functional system that is easy to install and operate.

A 4-20 mA output and ModBus interface, allow the unit to be connected directly to a PLC, DCS, or stand-alone control system. Industrial Scientific's "smart" sensor technology allows for single or dual sensor operation. The sensors can be mounted directly onto the iTrans™, or placed remotely up to 200 meters away. The unit can be upgraded in the field by adding a second sensor at a later date. This capability makes the unit extremely flexible and cost-effective.

Industries and Applications:
Steel Manufacturing – O_2, LEL, CO, or CO-H_2 Null
Drilling – H_2S and LEL
Refining – H_2S, LEL and SO_2
Pulp and Paper – Cl_2, ClO_2, SO_2, and H_2S
Power Plants – LEL, O_2, and CO
Water/Waste Water Treatment – Cl_2, ClO_2, and H_2S
Food Processing – NH_3 and O_2
Tunneling /Ventilation – CO

iTrans – Stand-Alone System™ with on-board audible and visual alarms, offers a wide variety of sensor configurations and relay options for maximum flexibility and affordability. Use the following guide to select the options that best fit your monitoring needs and applications. Industrial Scientific recommends that a fixed system application survey be completed to help provide the most accurate assessment of your equipment requirements.

iTrans Base part number: **7814783-ABCDEFG (sensor options as listed below).**

Ordering example: A Stand-Alone iTrans with an on-board LEL (4-20 mA scale 0-100) and remote mount H_2S (4-20 mA scale 0-999) with supply would have a part number of **7814783-1C21240**

Stand Alone iTRANS™ PART NUMBER/ORDERING MATRIX

A-SENSOR 1 CONFIGURATION
1 - On-Board
2 - Remote *(max. distance = 200m)*
3 - Non-Hazardous Remote/Duct Mount
4 - On-Board With Splash Guard
5 - Remote With Splash Guard
(max. distance = 200m)

B-GAS SENSOR 1
1 - Carbon Monoxide (CO)
2 - Nitric Oxide (NO)
3 - Ammonia (NH_3)
4 - Hydrogen Sulfide (H_2S)
5 - Sulfur Dioxide (SO_2)
6 - Nitrogen Dioxide (NO_2)
7 - Chlorine (Cl_2)
8 - Chlorine Dioxide (ClO_2)
9 - Hydrogen Cyanide (HCN)
A - Oxygen (O_2)
B - LEL Infrared *(factory methane calibration)*
C - LEL Catalytic Plug-In *(factory pentane calibration)*
D - Carbon Monoxide-Hydrogen Null (CO-H_2)
F - Hydrogen Chloride (HCl)
G - LEL Infrared Propane
K - Phosphine (PH_3)
L - Hydrogen (H_2)

C-4-20 mA OUTPUT SCALE FOR SENSOR 1
0 - 0-999
1 - 0-500
2 - 0-100
3 - 0-50
4 - 0-30
5 - 0-10
6 - 0-2
7 - 0-1
8 - 0-20
9 - 0-200

D-OPTIONAL POWER SUPPLY
0 - No Power Supply
1 - With Optional Power Supply

E-SENSOR 2 CONFIGURATION
0 - No Sensor
1 - On-Board
2 - Remote *(max. distance = 200m)*
3 - Non-Hazardous Remote/Duct Mount
4 - On-Board With Splash Guard
5 - Remote With Splash Guard
(max. distance = 200m)

F-GAS SENSOR 2
1 - Carbon Monoxide (CO)
2 - Nitric Oxide (NO)
3 - Ammonia (NH_3)
4 - Hydrogen Sulfide (H_2S)
5 - Sulfur Dioxide (SO_2)
6 - Nitrogen Dioxide (NO_2)
7 - Chlorine (Cl_2)
8 - Chlorine Dioxide (ClO_2)
9 - Hydrogen Cyanide (HCN)
A - Oxygen (O_2)
B - LEL Infrared *(factory methane calibration)*
C - LEL Catalytic Plug-In *(factory pentane calibration)*
D - Carbon Monoxide-Hydrogen Null (CO-H_2)
F - Hydrogen Chloride (HCl)
G - LEL Infrared Propane
K - Phosphine (PH_3)
L - Hydrogen (H_2)

G-4-20 mA OUTPUT SCALE FOR SENSOR 2
0 - 0-999
1 - 0-500
2 - 0-100
3 - 0-50
4 - 0-30
5 - 0-10
6 - 0-2
7 - 0-1
8 - 0-20
9 - 0-200

COMMON CONFIGURATIONS

PART #	DESCRIPTION
7814783-1A410	iTrans, Alarm, On-Board O_2, w/Power Supply
7814783-1C210	iTrans, Alarm, On-Board LEL, w/Power Supply
7814783-1C211A4	iTrans Dual Unit, Alarm, On-Board LEL & O_2, w/Power Supply
7814783-1C21141	iTrans Dual Unit, Alarm, On-Board LEL & H_2S, w/Power Supply
7814783-1D010	iTrans, Alarm, On-Board CO-H_2 Null, w/Power Supply

PART #	DESCRIPTION
7814783-11011C2	iTrans Dual Unit, Alarm, On-Board CO and LEL, w/Power Supply
7814783-14110	iTrans, Alarm, On-Board H_2S, w/Power Supply
7814783-14111A4	iTrans Dual Unit, Alarm, On-Board H_2S and O_2, w/Power Supply
7814783-2C210	iTrans, Alarm, LEL, Remote, w/Power Supply
7814783-2C212A4	iTrans Dual Unit, Alarm, Remote LEL and O_2, w/Power Supply

Cabling must be ordered separately for remote sensors.
Consult factory for availability, additional gases, ranges and certification information. Subject to change without notice.

OLCT IR Fixed Monitor

- Combustible or CO_2 gas monitor
- Long-life, infrared (IR) sensor
- Resistant to sensor poisons and corrosion
- 4-20 mA output
- Onshore and offshore applications
- Minimal maintenance

OLCT IR

SPECIFICATIONS

HOUSING:
Stainless steel 316L

DETECTION PRINCIPLE:
Optics: Infrared absorption

GASES DETECTED:
Hydrocarbons, methane, propane/butane as standard, CO_2
(Others on request)

MEASURING RANGE:
Combustible gases – 0 to 100% LEL
Methane – 0 to 100% by volume
Carbon Dioxide – 0 to 3% by volume

INGRESS PROTECTION:
IP66

OUTPUT SIGNAL:
4-20 mA

POWER SUPPLY:
15 to 30 VDC at detector terminals

POWER CONSUMPTION:
2.5 W maximum

OPERATING TEMPERATURE:
25°C to +55 °C (-50 to 55°C for low temperature version).

APPROVALS CE

IECEx/ATEX – Ex d e ia IIC T4 (T135°C)
T. amb: -50°C to 65°C
Ingress Protection: IP66
Equipment Group and Category: II 2 GD
EMC: EN50270
SIL Approval: SIL2 capability according to EN 50402/EN61508)

Offshore platforms, petrochemical and chemical industries, naval installations, waste water treatment plants … in these types of environments, infrared technology is very often the only solution. The OLCT IR is built to withstand these harsh environments, which require the most efficient gas detection.

The OLCT IR includes a case fitted with a mounting system and a wiring compartment for electrical connections in explosive zones.

Using a magnetic system housed in this compartment, the user can calibrate the detector locally in explosive zones by setting the zero and sensitivity without opening the compartment cover.

Proven Leading-Edge Technology

"Zero Maintenance" Efficiency

- The semi-conductor electronics of the OLCT IR guarantee extreme accuracy and constant stability.
- Costs are considerably reduced:
  - Lifetime detector stability after initial calibration
  - Requires minimal maintenance

The answer to false alarms

- The economic implications of false alarms have led us to design the OLCT IR with the ability to ignore external elements that trigger false alarms.

Non-intrusive calibration

- Equipped with a non-intrusive system allowing a single operator to access a protected menu. The detector can therefore be calibrated in an explosive area in total compliance with safety rules.

Unrivaled Performance

Reliability

- Highly resistant to sensor poisoning
- High gas concentration does not saturate the transmitted signal
- All vital functions are maintained even if an accumulation of dust or other substances reduces transmission by 70%.
- Heated mirror and window to prevent misting or icing of the optics
- Operates in an oxygen deficient atmosphere

Durability

- Stainless steel explosion-proof compartment, secure connection compartment
- The mirror is made of quartz
- External optics are made of quartz capable of withstanding high pressure and abrasive substances.

Special Version

- Simultaneously optimizes the response to various hydrocarbons, meeting the requirements for multi-hazard sites.

- Stand-alone operation ability
- Large LCD display
- Low power consumption
- Reduced wiring cost
- Non-intrusive operation via intrinsically safe infrared remote control
- Integrated relays
- Direct link, 4-20 mA, loop and isolated sensor mode

OLCT 80

Available Sensors:
AsH_3, CH_4, Cl_2, ClO_2, CO, CO/H_2 null, CO_2, H_2, H_2S, HCl, HCN, LEL, NO_2, NO, NH_3, O_2, O_3, PH_3, VOC's, SiH_4, SO_2

SPECIFICATIONS

HOUSING:
Stainless steel 316L

ENCLOSURE:
Aluminium

DETECTION PRINCIPLES:
Catalytic, Electrochemical, Semiconductor

MEASURING RANGES:
Oxygen – 0 to 30% by volume
Carbon Monoxide – 0 to 100, 0 to 300 and 0 to 1,000 ppm
Hydrogen Sulfide – 0 to 30, 0 to 100 and 0 to 1,000 ppm
Nitric Oxide – 0 to 100, 0 to 300 and 0 to 1,000 ppm
Nitrogen Dioxide – 0 to 10 and 0 to 30 ppm
Sulfur Dioxide – 0 to 10, 0 to 30 and 0 to 100 ppm
Chlorine – 0 to 10 ppm
Hydrogen – 0 to 2,000 ppm
Hydrogen Chloride – 0 to 30 and 0 to 100 ppm
Hydrogen Cyanide – 0 to 10 and 0 to 30 ppm
Ammonia – 0 to 100 and 0 to 1,000 ppm
Ozone – 0 to 1 ppm
Phosphine – 0 to 1 ppm
Chlorine Dioxide – 0 to 3 ppm
Silane – 0 to 50 ppm
Arsine – 0 to 1 ppm
Methane (catharometer) – 0 to 100% by volume
Hydrogen (catharometer) – 0 to 100% by volume
Ammonia (catalytic) – 0 to 5,000 ppm
Combustible gases (catalytic) – 0 to 100% LEL
VOCs (general) – 0 to 500 ppm
Carbon Monoxide/Hydrogen-null – 0 to 1,000 ppm

DISPLAY:
4-digit LCD display for measurement and one alphanumeric line for texts,
Pictograms - backlighting
4 indicator lamps:
1 green: "Operation OK",
1 yellow: "Fault",
2 red: "Alarm 1" and "Alarm 2"

Developed in compliance with the strictest specifications, the OLCT 80 is a major breakthrough in combining technical performance and cost optimization. With a wide range of sensor options, the OLCT 80 can meet a variety of needs at the largest industrial facilities.

ACCESSORIES

- Infrared remote control
- Tool kit
- Bypass adapter
- Cover key
- Calibration cup
- Splash guard
- Remote gas introduction device
- Gas collector

APPROVALS CE

ATEX – EEx d IIC T5 (T100°C) or T6 (T85°C)
EEx d ia IIC T4 (T135 °C)
Equipment Group and Category: II 2 GD
EMC: EN50270

OLCT 60 Fixed Monitor

- Intrinsically Safe (IS) and XP approved
- Corrosion resistant
- 4-20 mA output
- Back-lit display
- Pre-calibrated sensor
- Non-intrusive local calibration

OLCT 60

Available Sensors:
AsH_3, CH_4, Cl_2, ClO_2, CO, H_2, H_2S, HCl, HCN, LEL, NO_2, NO, NH_3, O_2, O_3, PH_3, SiH_4, SO_2

SPECIFICATIONS

HOUSING:
Stainless steel type 316 L

ENCLOSURE:
AS7 606 alloy - epoxy polyester paint

DETECTION PRINCIPLES:
Catalytic/Electrochemical

MEASURING RANGES:
Oxygen – 0 to 30% by volume
Carbon Monoxide – 0 to 100, 0 to 300 and 0 to 1,000 ppm
Hydrogen Sulfide – 0 to 30, 0 to 100 and 0 to 1,000 ppm
Nitric Oxide – 0 to 100, 0 to 300 and 0 to 1,000 ppm
Nitrogen Dioxide – 0 to 10 and 0 to 30 ppm
Sulfur Dioxide – 0 to 10, 0 to 30 and 0 to 100 ppm
Chlorine – 0 to 10 ppm
Hydrogen – 0 to 2,000 ppm
Hydrogen Chloride – 0 to 30 and 0 to 100 ppm
Hydrogen Cyanide – 0 to 10 and 0 to 30 ppm
Ammonia – 0 to 100 and 0 to 1,000 ppm
Ozone – 0 to 1 ppm
Phosphine – 0 to 1 ppm
Chlorine Dioxide – 0 to 3 ppm
Silane – 0 to 50 ppm
Arsine – 0 to 1 ppm
Methane (catharometer) – 0 to 100% by volume
Hydrogen (catharometer) – 0 to 100% by volume
Ammonia (catalytic) – 0 to 5,000 ppm
Combustible gases (catalytic) – 0 to 100% LEL

DISPLAY:
Backlit LCD display (4 digits)+ pictograms + 2 LEDs Backlight
LCD display (4 digits)+ pictograms + 2 LEDs

MAXIMUM POWER CONSUMPTION:
100 mA (catalytic), 40 mA (electrochemical)

OUTPUT SIGNAL:
4-20 mA

Introducing the OLCT 60, a new generation of high quality gas detectors which covers all industrial needs for a variety of applications.

The OLCT 60 Series includes several versions:

- XP or IS sensor (toxic or oxygen versions)
- Remote or on-board sensor. The OLCT 60AD version allows the sensor to be installed remotely up to 15 meters (standard), allowing detection in inaccessible locations, or in Zone 0 in the case of the intrinsically safe (IS) version.

OLCT 60 detector units are made of 316L stainless steel, and are rugged and resistant to corrosion. Pre-calibrated sensors can be disconnected by turning the head of the unit. These “smart” sensors can be calibrated outside hazardous areas.

APPROVALS CE

ATEX – IEEx d IIC T6
EEX d ia IIC T4 (w/IS sensor)
Equipment Group and Category: II 2 GD
EMC: EN50270

Available Sensors:
AsH_3, CH_4, Cl_2, ClO_2, CO, H_2, H_2S, HCl, HCN, LEL, NO_2, NO, NH_3, O_2, O_3, PH_3, SiH_4, SO_2

- **Intrinsically Safe (IS) and XP approved**
- **Corrosion resistant**
- **4-20 mA output**
- **Pre-calibrated sensor unit**
- **IP 66**

Introducing the OLC(T) 50, a new generation of high quality gas detectors designed for manufacturing plants, refineries and other industries to accommodate your gas detection requirements at a great price.

OLCT 50 Detector

The enclosure, which is made of alloy AS7 606 is coated with polyester epoxy paint (stainless-steel is also an option), and is rugged and resistant to corrosive agents. The OLC(T) 50 detectors are practical and easy to use. The combustible gas sensors are resistant to poisons, offer quick response times, and provide accurate gas measurement.

OLCT 50D Detector

Based on the OLCT 50 detector-transmitter, the OLCT 50D allows the detector unit to be used in a remote mode.

The detector is equipped with a 15 meter long cable (standard) and a packing gland for direct connection for detection in difficult locations.

New Generation: New Advantages

The detector units, which are made of 316L stainless steel, are durable and resistant to harsh environmental elements. Certified IP 66, OLC 50 and OLCT 50 Series are tightly sealed to avoid contamination from dust and liquid splashes. The pre-calibrated sensors of the OLCT 50 and OLCT 50D can be disconnected by simply turning the head of the unit. The "smart" sensors can be calibrated outside hazardous areas.

SPECIFICATIONS

HOUSING:
Stainless steel type 316 L

ENCLOSURE:
AS7 606 alloy - epoxy polyester paint

DETECTION PRINCIPLES:
Catalytic/Electrochemical

MEASURING RANGES:
Oxygen – 0 to 30% by volume
Carbon Monoxide – 0 to 100, 0 to 300 and 0 to 1,000 ppm
Hydrogen Sulfide – 0 to 30, 0 to 100 and 0 to 1,000 ppm
Nitric Oxide – 0 to 100, 0 to 300 and 0 to 1,000 ppm
Nitrogen Dioxide – 0 to 10 and 0 to 30 ppm
Sulfur Dioxide – 0 to 10, 0 to 30 and 0 to 100 ppm
Chlorine – 0 to 10 ppm
Hydrogen – 0 to 2,000 ppm
Hydrogen Chloride – 0 to 30 and 0 to 100 ppm
Hydrogen Cyanide – 0 to 10 and 0 to 30 ppm
Ammonia – 0 to 100 and 0 to 1,000 ppm
Ozone – 0 to 1 ppm
Phosphine – 0 to 1 ppm
Chlorine Dioxide – 0 to 2 ppm
Silane – 0 to 50 ppm
Arsine – 0 to 1 ppm
Methane (catharometer) – 0 to 100% by volume
Hydrogen (catharometer) – 0 to 100% by volume
Ammonia (catalytic) – 0 to 5,000 ppm
Combustible gases (catalytic) – 0 to 100% LEL

MAXIMUM POWER CONSUMPTION:
100 mA (catalytic), 25 mA (electrochemical), (IS transmitter), 340 mA (Wheatstone bridge)

OUTPUT SIGNAL:
4-20 mA Wheatstone bridge

POWER SUPPLY AT THE DETECTOR:
15 to 30 VDC (catalytic)
10 to 30 VDC (chemical)
10 to 26 VDC (intrinsically safe transmitter)
2,7 VDC max (flameproof detector)

APPROVALS CE

Flameproof detector and transmitter
ATEX – EEx d IIC T6
Ingress Protection: IP66
Equipment Group and Category: II 2 GD
EMC: EN50270

Intrinsically safe transmitter
ATEX II – EEx ia IIC T4
Ingress Protection: IP66
Equipment Group and Category: II 1 GD
EMC: EN50270

OLC(T) 20 Fixed Monitor

Available Sensors:
AsH_3, CH_4, Cl_2, ClO_2, CO, H_2, H_2S, HCl, HCN, LEL, NO_2, NO, NH_3, O_2, O_3, PH_3, SiH_4, SO_2

- **Intrinsically Safe (IS) and XP approved**
- **Corrosion resistant**
- **4-20 mA output**
- **Pre-calibrated sensor unit**
- **Small in size**

The OLC(T) 20 Series of gas detectors are designed for indoor or outdoor facility monitoring and other applications to accommodate your gas detection requirements at a reasonable price.

OLC 20 Detector

The new generation of OLC 20 combustible sensors are unaffected by poisons. The units provide extremely quick response times and complete reliability. They can be fitted on a housing with a M25 or 3/4" NPT thread.

OLC 20D Detector

Based on the OLC 20 sensor unit, the OLC 20D detector is equipped with a 15 meter cable (standard version) and fitting gland for direct connection to a data logger. A high-temperature version allows operation up to 200°C.

New Generation: New Advantages

The stainless steel detector provides protection and resistance to corrosive agents. Classified IP 66, they are resistant to dust and water ingress. The precalibrated sensors of the OLCT 20 and OLCT 20D can be disconnected by turning the head of the unit. These “smart” sensors can be calibrated on a work bench, outside hazardous areas.

SPECIFICATIONS

HOUSING:
Stainless steel type 316 L

ENCLOSURE:
Stainless steel - epoxy polyester paint

DETECTION PRINCIPLES:
Catalytic/Electrochemical

MEASURING RANGES:
Oxygen – 0 to 30% by volume
Carbon Monoxide – 0 to 100, 0 to 300 and 0 to 1,000 ppm
Hydrogen Sulfide – 0 to 30, 0 to 100 and 0 to 1,000 ppm
Nitric Oxide – 0 to 100, 0 to 300 and 0 to 1,000 ppm
Nitrogen Dioxide – 0 to 10 and 0 to 30 ppm
Sulfur Dioxide – 0 to 10, 0 to 30 and 0 to 100 ppm
Chlorine – 0 to 10 ppm
Hydrogen – 0 to 2,000 ppm
Hydrogen Chloride – 0 to 30 and 0 to 100 ppm
Hydrogen Cyanide – 0 to 10 and 0 to 30 ppm
Ammonia – 0 to 100 and 0 to 1,000 ppm
Ozone – 0 to 1 ppm
Phosphine – 0 to 1 ppm
Chlorine Dioxide – 0 to 3 ppm
Silane – 0 to 50 ppm
Arsine – 0 to 1 ppm
Methane (catharometer) – 0 to 100% by volume
Hydrogen (catharometer) – 0 to 100% by volume
Ammonia (catalytic) – 0 to 5,000 ppm
Combustible gases (catalytic) – 0 to 100% LEL

MAXIMUM POWER CONSUMPTION:
100 mA (catalytic), 25 mA (chemical), (IS transmitter)

OUTPUT SIGNAL:
4-20 mA /Wheatstone bridge

POWER SUPPLY AT THE DETECTOR:
15 to 30 VDC (catalytic)
10 to 30 VDC (chemical)
10 to 26 VDC (intrinsically safe transmitter)

APPROVALS CE

Flameproof detector and transmitter
ATEX – EEx d IIC T6
Ingress Protection: IP66
Equipment Group and Category: II 2 GD
EMC: EN50270

Intrinsically safe transmitter
ATEX – EEx ia IIC T4
Ingress Protection: IP66
Equipment Group and Category: II 1 GD
EMC: EN50270

- Toxic or combustible gas monitor (OLCT 10)
- Combustible gas monitor (OLC 10)
- Designed for boiler rooms and car parks
- ATEX Approved for use in hazardous areas
- IP66

Designed for use in boiler rooms and parking garages, the OLCT 10 and OLC 10 monitors give you the most cost-effective solution for the continuous monitoring of toxic (OLCT 10) or flammable gases (OLCT 10, OLC 10) and vapors in ambient air. Easy to install and operate, these detectors combined with the MX 15 control unit meet demanding user requirements.

SPECIFICATIONS

HOUSING:
ABS

IP RATING:
Third-party certified IP66

DETECTION PRINCIPLES:
Catalytic/Electrochemical

MEASURING RANGES (OLCT 10):
Carbon Monoxide – 0 to 300 ppm
Nitric Oxide – 0 to 100 ppm
Nitrogen Dioxide – 0 to 30 ppm
Combustible gases (catalytic) – 0-100% LEL

MEASURING RANGE (OLC 10):
Combustible gases (catalytic) – 0-100% LEL

TEMPERATURE RANGE:
-10°C to 45°C (14°F to 113°F)

HUMIDITY RANGE:
15% RH to 90% RH

MAXIMUM POWER CONSUMPTION:
30 mA

OUTPUT SIGNAL (OLCT 10):
4-20 mA

OUTPUT SIGNAL (OLC 10):
Wheatstone bridge

POWER SUPPLY AT THE DETECTOR:
15 to 30 VDC (nominal 24 VDC)

APPROVALS CE

ATEX – EEx nA II C T4
Ingress Protection: IP66
Equipment Group and Category: II 3 G
EMC: EN50270

- Combustible gas monitor
- Durable housing
- Explosion proof sensor
- ATEX Approved

CEX 300

Designed for the industrial and commercial sector (buildings, schools, boiler rooms, etc), the CEX 300 flammable gas detector has a durable housing and an explosion-proof sensor.

The CEX 300 is designed to be connected to a controller and can be placed in hazardous areas to guard against risk of a gas explosion. The CEX 300 detector has an ingress protection rating of IP 66 (dust-proof and water-resistant).

APPROVALS CE

ATEX – EEx ed IIC T6 (–25 to +60°C)
EEx ed IIC T5 (–25 to +70°C)
Ingress Protection: IP66
Equipment Group and Category: II 2 G
EMC: EN50270
SIL2 approved according to EN 50402

- O_2, CO_2 or toxic gas monitor
- Designed for unclassified areas
- Optional backlit display
- Durable in harsh environments
- Sensors available for Cl_2, ClO_2, CO, CO_2, H_2, H_2S, HCl, HCN, NO_2, NO, NH_3, O_2, PH_3 and SO_2

CTX 300

When hazardous levels of toxic gases, carbon dioxide or oxygen threaten the safety of an unclassified area, the CTX 300 can satisfy the most demanding safety requirements. The CTX 300 transmits data in record time. And, with a wide range of sensor options, it has the flexibility to protect many potentially hazardous environments.

Maintaining the unit is easy with pre-calibrated sensors and an optional LCD display (O_2 and toxic sensor versions only).

APPROVALS CE

CERTIFICATION:
Safe area only

CPS™ Car Park System

- Gas detection system for parking facilities and tunnels
- Up to 256 points per system
- Up to 1,000 times faster than a pump system
- Parking facility electricity savings of up to 40%

Available Sensors:
CO, NO, NO_2, CH_4, LPG, H_2

CPS™ CENTRAL DETECTION CONTROLLER SPECIFICATIONS

WALL-MOUNT DIMENSIONS
320 mm x 180 mm x 95 mm (12.6" x 7.09" x 3.74")

DEGREE OF PROTECTION
IP 54

CABLE GLAND
5 M20 cable glands – 5 to 12 mm dia. for power supply and local relays
9 grommets Diameter: 5 to 7 mm or PG-9.

RACK-MOUNT DIMENSIONS
Length: 19" - Height: 4 U (176 mm)

INGRESS PROTECTION:
IP31

OPERATING CONDITIONS

TEMPERATURE RANGE
-10°C to 40°C

HUMIDITY RANGE
5 to 95% noncondensing

MAIN POWER SUPPLY
Voltage: 85 to 264 VAC
Current: 1.5 A (115 VAC) /0.8 A (230 VAC)

INTERNAL BACKUP BATTERY
Optional, 600 mA/h capacity

CONSUMPTION
140 mA + 12 mA per measurement line (240 mA max.)

MEASURING LINES

CAPACITY
8 lines of 32 modules

CABLE TYPE
2 shielded twisted pairs RS-485 cable

MODULE POWER SUPPLY
12 to 30 VCC power supply delivered to modules

DIGITAL MODULE NETWORK
ModBus RS-485, 1-32 addresses selected with mini switches.

DISPLAY
Backlit LCD display screen (2 lines of 32 characters each
1 line of pictograms)
3 operation status LEDs: OK, Fault, Alarms

ALARMS

NUMBER OF ALARMS
6 per sensor (Out of range – Fault)

3 LOCAL INTERNAL RELAYS
R1 (alarm/fault) – R2 (alarm) – R3 (alarm)

MINIMUM CHARGE FOR RCT CONTACTS
2A/250 VAC-30 VCC (resistive charge)

DIGITAL OUTPUTS
ModBus RS-485 protocol (connection with a centralized supervision device)
RS-232 or USB: USB protocol priority (permanent connection to system configuration)

Safe, accurate and reliable

The CPS Car Park System™ provides accurate and reliable monitoring for the highest level of protection in parking facilities and tunnels. The system was designed to comply with the high safety standards enforced in such European countries as Germany, the Netherlands and Belgium.

Economical

The technology used in the Car Park System™ allows for the continuous monitoring and control of gas hazards within a facility. The Car Park System™ significantly reduces your operating costs by optimizing the efficiency of ventilation systems and servo controls. Such efficiencies can produce energy savings of up to 40% when used with certain equipment.

Adaptable

Available in wall- and rack- mounted versions, the CPS™ central controller and various modules are user-programmable for specific applications. The system's networking technology also enables the Car Park System® to adapt to any installation up to:

- 256 sensors capable of monitoring 10 different gases
- 256 addressable relays
- 64 logic inputs
- 256 analog outputs.

Several servo controls can be used: low speed/high speed, delays, forced operation, night mode, etc.

APPROVALS CE

LOW VOLTAGE DIRECTIVE:
This device is in compliance with the security requirements of Directive 73/23/EEC, modified by Directive 93/68/EEC, based on standard 61010-1 and its second amendment

METROLOGY:
Underground parking facilities: according to VDI 2053

INGRESS PROTECTION: IP54

EMC: EN50270

MODULE SPECIFICATIONS

CPS 10 SENSOR MODULE

DIMENSIONS
118 mm x 110 mm x 60 mm (4.65" x 4.35" x 2.36")

DEGREE OF PROTECTION
IP 54

CABLE GLANDS
2 M16 cable glands 4-8 mm diameter – Power supply/ local relays

CONSUMPTION
2.5 mA for the toxic sensor in normal operation

STATUS INDICATION AFTER CALIBRATION
Red/green electroluminescent diode

CALIBRATION
Automatic, non-intrusive

MEASURING RANGES:
Carbon Monoxide – 0 to 300 ppm in 1 ppm increments
Nitric Oxide – 0 to 100 ppm in 1 ppm increments
Nitrogen Dioxide – 0 to 30 ppm in 0.1 ppm increments
Methane – 0 to 100% LEL in 1% increments
Liquefied Petroleum Gas – 0-100% LEL in 1% increments
Hydrogen – 0 to 100% LEL in 1% increments

SENSOR REPLACEMENT
Sensor replacement switch on the interior of the CPS 10 case

CPS RM4 OR RM8 RELAY MODULE

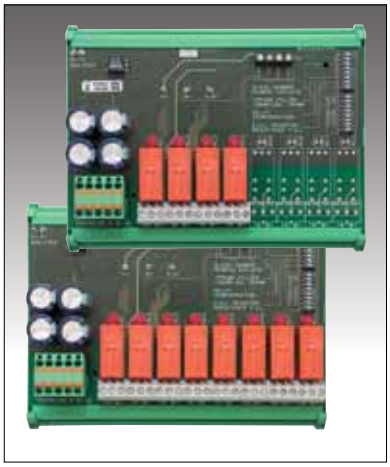
DIMENSIONS
125 mm x 165 mm x 60 mm (4.92" x 6.5" x 2.36")

NUMBER OF RELAYS
4 relays (CPS RM4); 8 relays (CPS RM8) – Contacts: RCT-type

MINIMUM CHARGE FOR CONTACTS
2 A /250 V over resistive charge

CONSUMPTION
3.5 mA in normal operation

Configuration of positive or negative relay security with mini switches. Relay modules are equipped with 2 all-or-nothing inputs



CPS DI16 LOGIC INPUT MODULE

DIMENSIONS
125 mm x 165 mm x 60 mm (4.92" x 6.5" x 2.36")

NUMBER OF ALL-OR-NOTHING INPUTS
16

CONSUMPTION
2 mA in normal operation

CPS A04 ANALOG OUTPUT MODULE

DIMENSIONS
125 mm x 165 mm x 60 mm (4.92" x 6.5" x 2.36")

NUMBER OF ANALOG OUTPUTS
4

CONSUMPTION
2 mA in normal operation

ORDERING INFORMATION

		US $
6514868	CPS Wall-Mounting Control unit	$ 2,086.00
6514869	CPS Rack-Mounted Control unit	$ 2,170.00

CPS 10 SENSOR MODULES

6513591	CPS 10 Carbon Monoxide Sensor Module	$ 259.00
6513592	CPS 10 Nitric Oxide Sensor Module	$ 329.00
6513593	CPS 10 Nitrogen Dioxide Sensor Module	$ 329.00
6513594	CPS 10 0-100% LEL CH_4, LPG or H_2 Sensor Modules (specify when ordering)	$ 259.00

ACCESSORIES

WCOMCPS	Configuration Software (including 1 CD + 1 USB interface)	$ 686.00
6313962	4 Relay Module	$ 294.00
6313963	8 Relay Module	$ 329.00
6313964	16 Logic Input Module	$ 301.00
6313980	4 Analogic Output Module	$ 595.00
6311098	Emergency Power Supply	$ 301.00
6321400	Cable Gland Skirt for the CPS Wall Mounting Control Unit	$ 21.00
6114632	Integrated Printer AP1200 only for Rack Mounted Version	$ 637.00
6090336	Paper Rolls for AP1200 (5 pc)	$ 19.50
6114629	Desk Top Printer DPU-414 + Charger	$ 595.00
6090319	Paper Rolls for Desk Top Printer DPU-414 - (5pc)	$ 35.00
6331163	Calibration Kit for CPS10 (including a stainless steel bar and a magnetic calibration cap)	$ 84.00
6116026	Sub-D/Sub-D Cable for PC	$ 84.00
6116272	Prog /USB Cable	$ 21.00
6116273	Sub-D/Sub-D Cable for Printer	$ 35.00

AirAware™ Single Gas Monitor

- Ideal for light industrial applications
- Low cost single gas monitor
- Optional on-board alarm and relays

SPECIFICATIONS

CASE:
NEMA 4 type, general purpose indoor use. Electroplated for radio frequency interference (RFI) protection.

DIMENSIONS:
182.9 mm x 142.2 mm x 40.6 mm (7.2" x 5.6" x 1.6")

WEIGHT:
454 g (16 oz)

SENSOR TYPE:
Electrochemical

MEASURING RANGES:
Carbon Monoxide, Hydrogen Sulfide – 0 to 999 ppm in 1 ppm increments
Nitric Oxide – 0 to 999 ppm in 1 ppm increments
Ammonia – 0 to 200 ppm in 1 ppm increments
Oxygen – 0 to 30% by volume in 0.1% increments
Sulfur Dioxide, Nitrogen Dioxide – 0.2 to 99.9 ppm in 0.1 ppm increments
Chlorine – 0.2 to 50 ppm in 0.1 ppm increments
Chlorine Dioxide – 0 to 1 ppm in 0.1 ppm increments
Hydrogen Cyanide – 0.2 to 30 ppm in 0.1 ppm increments
Hydrogen Chloride – 0.2 to 30 ppm in 0.1 ppm increments
Phosphine – 0 to 1 ppm in 0.01 ppm increments

POWER SOURCE (RUN TIME):
12-24 VDC (110/220 AC adapter optional with N. American plug)

TEMPERATURE RANGE:
-20°C to 50°C (-4°F to 122°F), typical, consult factory for gas specific temperature ranges

HUMIDITY RANGE:
Oxygen – 0-99%
Ammonia, Carbon Monoxide, Hydrogen Sulfide, Nitrogen Dioxide, Sulfur Dioxide – 15-90%

APPROVALS

CSA – C.22.2 No. 205-M 1983 (Non-hazardous locations)

Industry proven performance combined with a new, low-profile design make the Industrial Scientific AirAware™ a logical choice for those critical areas that require continuous monitoring but not the environmental protection of an explosion-proof enclosure. Providing discrete monitoring and enhanced aesthetics for more commercial or institutional settings, the AirAware™ Series is the ideal solution for reliable, low-cost fixed-point monitoring.

The AirAware™ can be configured to operate as a monitor with local LED display, a controller with on-board relay switching capability, a transmitter with 4-20mA outputs, or as a controller/transmitter with on-board relays. Each configuration is designed to meet your specific indoor monitoring needs. Every AirAware™ is equipped with electrochemical sensing technology, dual alarm LEDs, a digital display providing real-time readings, ModBus RTU outputs, push-button operation and a NEMA 4 type enclosure. When alarm conditions are met, low/high alarm visual indicators alert users to gas hazards.

Standard operating power is 12-24 VDC for the AirAware™, while a 110/220 VAC power supply option is available for convenient plug-in monitoring applications. Configure your AirAware™ to match your needs, adding options such as on-board audible alarm for maximum attention, or a vanity plate to hide the display. The AirAware™ is covered by a one-year warranty.

AirAware™ has numerous sensor and equipment configurations that allow you to customize the monitor to meet your specific needs. The following matrix will help you to select the options within a single part number. For example, a part number of **68100056-11211** would be an AirAware Carbon Monoxide monitor with an on-board audible alarm, a 4-20mA output with no on-board relay contacts, an AC power adapter installed and a vanity/faceplate cover.

AirAware™ PART NUMBER/ORDERING MATRIX

BASE PART NUMBER: 68100056-ABCDE

A-GAS TYPE

1 - Carbon Monoxide (CO)
2 - Nitric Oxide (NO)
3 - Ammonia (NH_3)
4 - Hydrogen Sulfide (H_2S)
5 - Sulfur Dioxide (SO_2)
6 - Nitrogen Dioxide (NO_2)
7 - Chlorine (Cl_2)
8 - Chlorine Dioxide (ClO_2)
9 - Hydrogen Cyanide (HCN)
A - Oxygen (O_2)
F - Hydrogen Chloride (HCl)
K - Phosphine (PH_3)

B-ON-BOARD ALARM

0 - No audio alarm
1 - On-board audio alarm

C- OUTPUT OPTION

0 - None
1 - On-board relays (Control)
2 - 4-20mA output (Transmit)
3 - 4-20mA output and relays (Control/Transmit)

D-POWER OPTION

0 - No adapter
1 - AC Power Adapter (Installed)

E-VANITY PLATE (FACEPLATE COVER) OPTION

0 - None
1 - Vanity Plate

**Note: AC Adapter is 110 VAC to 24 VDC, N. American plug.*

AirAware™ MONITOR

- Simple installation, plugs into any standard 120 VDC wall outlet (US version) or uses 12-24 VDC operation
- Low/high audio and visual alarms alert users to gas hazards
- Single button calibration, alarm muting and air zero functions

AirAware™ CONTROL

- 12-24 VDC operation
- Visual alarm (audio optional)
- Dual-alarm relays can turn on fans and warning sirens or shut-down a process
- Single button calibration, alarm muting and air zero functions
- 12-24 VDC operation

AirAware™ TRANSMIT

- Interfaces with any control device accepting 4-20 mA output
- Visual alarm to alert of potential gas hazards (audio optional)
- Single button calibration, alarm muting and air zero functions

AirAware™ C/T

- 12-24 VDC operation
- Interfaces with any control device accepting 4-20 mA output
- Dual-alarm relays can turn on fans and warning sirens or shut-down a process
- Single button calibration, alarm muting and air zero functions

AirAware™ COMMON CONFIGURATIONS

PART #	DESCRIPTION
68100056-11010	CO Monitor w/Power Supply, Audio Alarm
68100056-11100	CO Control w/Audio Alarm
68100056-11300	CO Control/Transmit w/Audio Alarm
68100056-31010	NH_3 Monitor w/Power Supply, Audio Alarm
68100056-31100	NH_3 Control w/Audio Alarm
68100056-31300	NH_3 Control/Transmit w/Audio Alarm
68100056-71010	Cl_2 Monitor w/Power Supply, Audio Alarm
68100056-71100	Cl_2 Control w/Audio Alarm
68100056-71300	Cl_2 Control/Transmit w/Audio Alarm
68100056-A1010	O_2 Monitor w/Power Supply, Audio Alarm
68100056-A1100	O_2 Control w/Audio Alarm
68100056-A1300	O_2 Control/Transmit w/Audio Alarm

AirAware™ REPLACEMENT SENSORS

PART #	DESCRIPTION
17071093	Ammonia Sensor
17051638	Carbon Monoxide Sensor
17077330	Chlorine Sensor
17077983	Chlorine Dioxide Sensor
17066374	Hydrogen Chloride Sensor
17070186	Hydrogen Cyanide Sensor
17033960	Hydrogen Sulfide Sensor
17071242	Nitric Oxide Sensor
17060591	Nitrogen Dioxide Sensor
17050129	Oxygen Sensor
17077355	Phosphine Sensor
17060575	Sulfur Dioxide Sensor

AirAware™ ACCESSORIES

PART #	DESCRIPTION
67001198	Optional Vanity Cover
67000604	Calibration Adaptor Assembly (includes cal adaptor, tubing and reducer)
67000596	Calibration Adaptor for AirAware (adaptor only)
67000265	110/220 VAC/24 VDC, Power Adapter
17099391	Nylon Strain Relief for 67000265 Power Supply

MX 62 Controller

- **1-64 Analog input channels**
- **Redundant processor for continual measurements**
- **Serial connection for SCADA or DCS**
- **SIL2 and SIL3**
- **Direct connections either on network or in loops**

The MX 62 provides a redundant system to ensure an accurate analysis from the sensors. The MX 62 monitor has incorporated these new requirements and other future needs. Through its modularity, flexibility and reduced operating costs, the MX 62 is an attractive solution for all gas and flame detection needs.

The MX 62 system meets the requirements of ATEX 100 A and offers the high level of security required by SK2 and SIL2 rated systems.

A secure installation for optimized costs

An entirely secure installation

- The structure of the MX 62 system has been developed to provide dual measurement. Reliable data is passed quickly from the detectors to the relays.

A structured programming

- The ConfigPro.Exe software configures the MX 62 via a PC.
- Access to the different functions is protected by several passwords.

Space saving and easy access

An optimized cost

- The innovative design meets the new requirements in terms of security and safety
- The modularity allows a personalized operation and reduces wiring costs
- The flexibility helps integration of your system
- The reliability ensures minimum maintenance
- Programmable outputs reduce relay requirements

SPECIFICATIONS

CAPACITY:
64 secure channels per system (128 channels per console)

CASING:
Electric opening, box and console

DISPLAY:
High definition graphic alphanumeric LCD, remote and optional

PROGRAMMING:
Various possibilities : voting, boolean calculations, increasing and decreasing alarms, mean etc.

VISUAL ALARMS:
Gas: 4 thresholds
Maintenance:
- calibration mode
- fault
- zero checking

Power “on”

AUDIBLE ALARMS:
Via specialized relays

INPUTS:
4-20 mA, Digital

OUTPUTS:
4-20 mA, Digital Relays (128 max.)

PRINTER:
Centronix connection

POWER SUPPLY:
24 VDC, 230 VAC (others on demand)
Dual power supply

OPERATING TEMPERATURE:
-15°C to 50°C (5°F to 122°F)

STANDARD:
CE, SIL3 of EN 954-1 and BSV 03 ATEXG002X

RACK DIMENSIONS:
H from 3U x L 19" x P 12 cm

VARIOUS MODULES

LED Module A

16 channels (8 channels standard)

- 4 alarm thresholds
- Reset/acknowledge
- Power "on"
- Fault

LCD Module B

Up to 30 displays can be networked with the MX 62, allowing measurement display wherever you require.

- Graphic, alphanumeric, high definition LCD
- User-friendly display graphics
- Data storage: at least 5 days (option)
- Can be remote via RS 485

Printer Module C

- Printing alarms, relay operating status, fault, min/max average over 8 hours
- Type ASCII, alphanumeric 40 or 80 characters
- Parallel connection

CPU Module D

The CPU module is the heart of the system. Its backup power supply and two processors secure the MX 62 management. Plug in the LED and LCD modules, or remote connection via RS485 (4 wires + shield).

- Centralized management
- Connection to different modules
- Connection to an internal or external printer

Analog input Module E

Analog signals from the detectors to be input into the control system. Dual converters ensure reliable and redundant operation.

- Direct connection with the MX 62 system or remote via the adapter module
- Up to 8 measurement points, 2 or 3 wire

Adapter Module F

- Allows 3 operating modes:
  - Up to 16 addressable detectors in a loop configuration
  - Up to 8 addressable detectors combined with a remote analog module
  - Connection of 2 analog input modules
- The module can be remote via 2 RS485 networks (2 x 4 wires + screened system)

Relay Module G

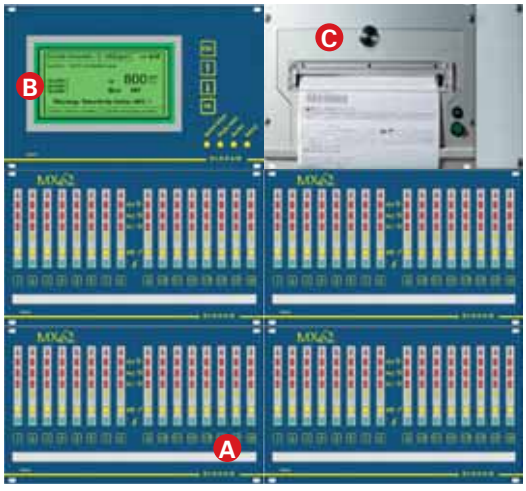
- Fitted with 2 processors linked with the CPU
  - Principal module: 8 relays
  - Extension module: 8 relays
  - NO/NC contacts
  - Breaking capacity: 460 VA, 60 W
  - Positive safety individually programmable
- The module can be remote via 2 RS485 (2 x 4 wires + screened system)

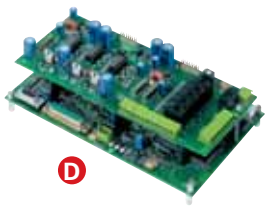
Analog Output Module H

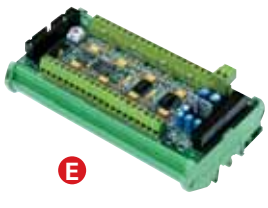
- Fitted with 2 processors linked with the CPU
  - Fitted with 8 analog 4-20 mA or 0-10 V outputs
- Each output is programmed to transmit:
  - The real time value for one each input
  - The linearized value
  - Means or max for a detectors group
- Mimic module: open collector (56) suitable to drive LED mimic panel as per MX 62 channels

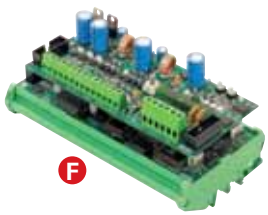
Communication Module I

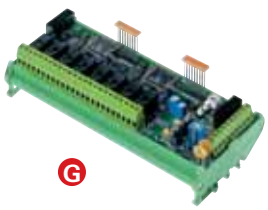
- Link to a supervisor for data exportation (PLC, DCS or SCADA)
- Link with CPU via the RS 232
- Personalized or ModBus protocol via RS 422
- Optional communication splitter module available

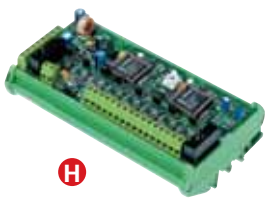


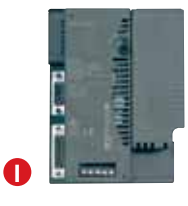












4800 Controller

- 8-48 analog inputs
- Up to 72 digital ModBus inputs
- Programmable relay outputs
- Telephone alarm notification
- 1,000 entry event log
- ModBus master or slave device
- Printer interface
- Easy channel configuration via local keypad or telephone

SPECIFICATIONS

ENCLOSURE:
NEMA 4X ABS plastic enclosure

ANALOG INPUTS:
8-48 analog inputs (8 per card): 4-20 mA, 0-20 mA, 0-1V, 0-5V, 0-10V, +/-1V, +/-5V, +/-10V

DIGITAL INPUTS:
0-72 digital ModBus RTU inputs

OUTPUTS:
Fully programmable relay outputs (4 per card)

DISPLAY:
LCD display for programming and viewing channel information. Tri-color LEDs for each analog input and relay output to show status of channel.

ALARM NOTIFICATION:
LCD alarm notification, LED alarm notification, audible alarm notification via local speaker, telephone dial out notification.

PROGRAMMING INTERFACE:
Local keypad or remotely via telephone

EVENT LOG:
Stores 1,000 entries. Entries include entering and leaving alarm states, peak readings and calibrations.

TEMPERATURE RANGE:
-40°F to 185°F (-40°C to 80°C)

OPERATING POWER RANGE:
100-240 VAC, 15-18 VDC, on board battery backup.

The 4800 Controller from Industrial Scientific is an 8-48 analog input controller. With its optional on-board relays, the 4800 can control alarms, fans, horns, etc., when alarm conditions are reached. Being fully programmable, relays can be set to activate from multiple channels, or multiple relays can be programmed to a single channel. Time delays can also be programmed for each relay. This allows the relays to activate after alarm conditions are met for specified periods, or de-activate after a specified time prior to an alarm.

Along with monitoring analog signals, the 4800 Controller can also monitor up to 72 digital ModBus RTU inputs. The 4800 can be set up as a ModBus RTU master unit to monitor these channels, or it can be set up as a ModBus RTU slave device. As a ModBus RTU slave device, the 4800 Controller can communicate to SCADA, HMI, and PLC controlled systems.

With a telephone line interface, the 4800 Controller has remote call-out capabilities. This allows the controller to phone, fax or page alarm notifications to users. Phone lists are user programmable and can be entered in a priority. The 4800 can also be remotely programmed via the telephone.

To keep track of events, the 4800 Controller has a built in event log. The event log will store 1,000 events. Events consist of calibrations, peaks and alarms. The event log can be viewed via a local printer connected to the 4800 Controller, or through a PC.

The 4800 Controller is an analog/digital input/output system controller with remote dial out and access capabilities. The base unit consists of a micro-controller with display, modem, AC and phone line surge protection and 24-hour battery back up. A maximum number of 72 channels can be used. However, the maximum number of modules (input and output) cannot exceed six in any combination. Industrial Scientific recommends that a fixed system application survey be completed to help provide the most accurate assessment of your equipment requirements.

4800 Controller Base Part Number: 4800-**ABCDEFGH**

A = Base Unit
B = Analog Input Options
C = Digital Options
D = ModBus RTU Input Channels Support Options
E = Controller to Controller Support Options
F = Relay Options
G = Datalogging Options
H = SCADA Connection Options

Ordering example: A 4800 Controller in a NEMA 4X wall mounted enclosure with 16 analog input channels, 8 ModBus RTU input channels, and 8 relay contacts would have a part number of 4800-**12010200**

4800 CONTROLLER PART NUMBER/ORDERING MATRIX

A-BASE UNIT
1 - NEMA 4X Wall Mount w/Display, 24 Hour Battery Back Up
2 - Sub-Panel Mount w/Display, 24 Hour Battery Back Up
3 - Flush Mount w/Display, 24 Hour Battery Back Up
4 - NEMA 4X Wall Mount Enclosure w/Display, 24 Hour Battery Back Up and Internal 24 VDC, 100W Power Supply

B-ANALOG INPUT OPTIONS
0 - None
1 - (1) 8-Channel Analog Module
2 - (2) 8-Channel Analog Modules (16 channels)
3 - (3) 8-Channel Analog Modules (24 channels)
4 - (4) 8-Channel Analog Modules (32 channels)
5 - (5) 8-Channel Analog Modules (40 channels)
6 - (6) 8-Channel Analog Modules (48 channels)

C-DIGITAL (DRY CONTACT) INPUT OPTIONS
0 - None
2 - 8-Channel Digital Input Module

D-MODBUS RTU INPUT CHANNELS SUPPORT OPTIONS
0 - None
1 - 8 Channels of RTU Supported
2 - 16 Channels of RTU Supported
3 - 24 Channels of RTU Supported
4 - 32 Channels of RTU Supported
5 - 40 Channels of RTU Supported
6 - 48 Channels of RTU Supported
7 - 56 Channels of RTU Supported
8 - 64 Channels of RTU Supported
9 - 72 Channels of RTU Supported

E-CONTROLLER TO CONTROLLER SUPPORT OPTIONS
0 - None
1 - Controller to Controller Communication Capable

F-RELAY OPTIONS
0 - None
1 - (1) 4-Relay Contact Module (4 Relays)
2 - (2) 4-Relay Contact Modules (8 Relays)
3 - (3) 4-Relay Contact Modules (12 Relays)
4 - (4) 4-Relay Contact Modules (16 Relays)

G-EVENT LOGGING OPTIONS
0 - None
1 - Datalogging

H-SCADA (PLC/DCS) CONNECTION OPTIONS
0 - None
1 - ModBus Slave Support via Serial, Phone or Radio Modem Connection

COMMON CONFIGURATIONS

PART #	DESCRIPTION
4800-12000210	4800 Controller, 16 Analog Inputs, 8 Relay Outputs, w/Datalogging
4800-12000200	4800 Controller, 16 Analog Inputs, 8 Relay Outputs
4800-12020210	4800 Controller, 16 Analog Inputs, 16 Digital ModBus Inputs, 8 Relay Outputs, w/Datalogging
4800-14000200	4800 Controller, 32 Analog Inputs, 8 Relay Outputs
4800-10040211	4800 Controller, 32 Digital ModBus Inputs, 8 Relay Outputs, Datalogging, SCADA Connection
4800-16000000	4800 Controller, 48 Analog Inputs, No Relay Outputs
4800-10090410	4800 Controller, 72 Digital ModBus Inputs, 16 Relay Outputs, Datalogging

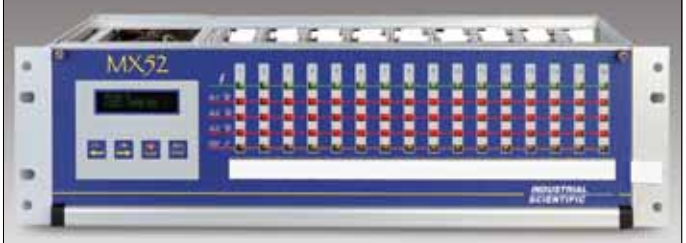
4800 CONTROLLER ACCESSORIES

PART #	DESCRIPTION
77026110	8 Channel Analog Input Card
77026128	4 Channel Relay Card

MX 52 Controller
MX 48 Controller

- 2-16 Analog input channels
- On-board relays
- SIL2
- 3 gas alarm thresholds, one with time delay, 1 common fault alarm

MX 52



SPECIFICATIONS

CAPACITY:
Up to 16 channels (8 cards ordered separately, 2 channels per card)

DISPLAY:
Fluorescent, 2 lines of 16 fixed or scrolling characters

FAULT ALARMS:
Fault interface link, detector, microcontroller; common fault relay

GAS ALARMS:
3 independent thresholds per channel
Third threshold delayed or averaged
Automatic or manual reset
Programmable increasing or decreasing alarm
Relay output per channel (alarm 1 and 2), common relay on alarm 3

AUDIBLE ALARMS:
80 dB at 30 cm

RELAYS:
2 independent gas alarm relays per channel
1 common gas alarm 3 relay or common audible alarm transfer
1 common fault relay
Programmable positive or negative safety on alarm relays
Fail safe on fault
Programmable NC or NO output on alarm 1, alarm 2 and fault alarm, SPDT on alarm 3

SIGNAL OUTPUT:
Analog 4-20 mA per channel
Serial RS 485 or 232 ModBus protocol

OPERATING TEMPERATURE:
-10°C to 45°C (14°F to 113°F)

HUMIDITY RANGE:
Relative humidity 5% to 95%, uncondensed

COMPLIANCE:
European Standards 50054, 50081 and 50082

ORDERING INFORMATION

PART #	DESCRIPTION
W52I020	Frame Rack 3 U 19" Type MX 52 fitted w/power and CPU cards. 16 channels, 230 VAC
W52I010	Frame Rack 3 U 19" Type MX 52 fitted with power and CPU cards. 16 channels, 110 VAC
W52I02I	Frame Rack 3 U 19" Type MX 52 equipped w/power and CPU cards. 16 channels version w/galvanic isolation, 230 VAC
W52I01I	Frame Rack 3 U 19" Type MX 52 equipped w/power and CPU cards. 16 channels version w/galvanic isolation, 110 VAC
6451424	2-Channel Card
6111264	Uninterrupted power supply (425 x 315 x 120 mm) Charger 24V - 12A - Batteries 24 Ah

- 4 and 8 Analog input channels
- On-board relays
- 4-20 mA pass-through
- Serial connection for SCADA or DCS

MX 48

SPECIFICATIONS

CAPACITY:
4 and 8 independent channel versions (4 channels standard)

DISPLAY:
Fluorescent, 2 lines of 16 fixed or scrolling characters

FAULT ALARMS:
Yellow LED on each channel
Common fault relay

GAS ALARMS:
3 independent thresholds per channel (Red LEDs)
Third threshold time-delayed or mean value
Manual or automatic reset
2 relay outputs per channel common relay on alarm 3

AUDIBLE ALARMS:
80 dB at 30 cm

RELAYS:
2 gas alarm relays per channel
1 relay common for alarm 3
Programmable positive or negative safety on alarm relay
Positive safety on failure
Programmable N.O. or N.C.

SIGNAL OUTPUT:
Analog 4-20 mA per channel,
Load resistance : 600 Ω max.
Serial RS 485 or 232 in ModBus (J-BUS),
Optional, opto-insulation format

OPERATING TEMPERATURE:
-20°C to 55°C (-4°F to 113°F)

HUMIDITY RANGE:
Relative humidity 5% to 95%, uncondensed

COMPLIANCE:
European Standards 50054, 50081 and 50082

IP RATING:
IP65

ORDERING INFORMATION

PART #	DESCRIPTION
W48I820	Wall Mounting Controller Type MX 48 fitted w/4 channels, 8 channels max., 230 VAC
W48O820	Wall Mounting Controller Type MX 48 fitted w/4 channels, 8 channels max., 230 VAC., European Version
W48I810	Wall Mounting Controller Type MX 48 fitted w/4 channels, 8 channels max., 110 VAC
6451452	Card of 4 Extra Channels for MX48
B103830	Wall-Mount Battery Backup System: Uninterrupted power supply (289 x 350 x 189 mm) for MX48.Charger 24V - 6A - Batteries 17 Ah

- 1-16 Digital input channels
- 1 On-board relay
- ModBus master and slave device
- Easy interface to SCADA, HMI, and PLCs
- 16 programmable channels for external relays

1600 Controller

The 1600 Controller will automatically recognize and configure channels based on the number of sensors attached to the unit; simplifying installation time and costs. A single on-board relay can be used to activate an external alarm device when alarm levels are reached.

SPECIFICATIONS

ENCLOSURE:
Fiberglass, NEMA 4X (weather resistant, lockable) or Flush mount

DIMENSIONS:
35.6 cm x 30.5 cm x 16.5 cm (14" x 12" x 6.5") (NEMA)
24.8 cm x 18.3 cm x 6.35 cm (9.75" x 7.22" x 2.5") flush mount

WEIGHT:
Approximately 0.9 kg (2 lbs)

NUMBER OF INPUTS:
16 ModBus RTU inputs

SENSOR EXCITATION VOLTAGE:
Optional 24 VDC, 45 W and 100 W power supplies available.

DISPLAY:
LCD, backlit, auto-shutoff

OUTPUTS:
1 relay, SPDT
RS-232 Serial Port

CONTACT RATINGS:
0.5 A at 120 VAC

OUTPUT CONNECTORS:
RS-232: 9 Pin D Sub-miniature, male
Relay: Quick disconnect, screw terminal
Input voltage: 12 VDC

ORDERING INFORMATION

PART #	DESCRIPTION
1600-12211	NEMA 4X Wall Mount Enclosure w/12 V, 45 W power supply*
1600-22211	Flush/Sub – Panel Mount w/12 V, 6 W power supply**
1600-32211	NEMA 4X Wall Mount Enclosure w/12 V, 100 W power supply***

* *Can power 6 iTrans™ units or 16 Digital Transmitters*
** *External power supply must be supplied to power iTrans™ and Digital Transmitters*
*** *Can power 16 iTrans™ units (single sensor versions) or 16 Digital Transmitters*

- Low cost controller for installations up to 2 channels
- Flexible ModBus RTU interface
- 4-20 mA outputs

820 Controller

A flexible solution for fixed-point gas monitoring installations, the 820 Controller is ideal for a wide range of applications from simple local monitoring to more elaborate network setups.

SPECIFICATIONS

ENCLOSURE:
ABS Composite; rack mount

DIMENSIONS:
10.8 cm x 13.8 cm x 12.8 cm (4.25" x 5.4" x 5.0")

WEIGHT:
560 kg (20 oz)

INPUTS:
Two 4-20 mA analog inputs

ANALOG OUTPUTS:
5 relays (2 low alarm, 2 high alarm, 1 fault)
alarm relays N.O., fault relays N.C.
Two 4-20 mA outputs

DIGITAL OUTPUTS:
RS-485 ModBus RTU Slave interface

DISPLAY:
2 channels - 4 digit, 7 segment LED (ea. channel)

PROGRAMMING INTERFACE:
Local keypad (4 keys plus 'clear')

ALARM NOTIFICATION:
2-channel real-time display notification; LED alarm notification; audible alarm notification

TEMPERATURE RANGE:
0°C to 70°C (32°F to 158°F)

OPERATING VOLTAGE:
24 VDC

ORDERING INFORMATION

PART #	DESCRIPTION
78104700	820 Analog Controller

* *Power supply must be ordered separately.*

MX 42A Controller

- 1-4 Analog input channels
- On-board relays
- 4-20 mA pass-through
- 3 gas alarm thresholds, 1 fault alarm
- LCD displays concentrations
- Continuous self-checking

SPECIFICATIONS

HOUSING:
Wall-mounted, polycarbonate IP 54

DEFAULT ALARMS:
Yellow LED
Fault detector
If you exceed 1/2 hour maintenance operating time

GAS ALARMS:
3 independent thresholds
3 specific red indicator lights
Rising or falling thresholds
Automatic or manual clearing (on thresholds 1 and 2), automatic clearing on threshold 3
3rd threshold instantaneous, based on mean value or time-delayed (programmable as required)
Thresholds 1 and 2 comply with control logic of exhaust systems (programming)

AUDIBLE ALARMS:
Following failure sequence and measurement alarm (optional)

RELAYS:
2 independent relays per channel (programming) on 1st and 2nd threshold
Common relay on threshold 3
Common failure relay
Fail safe operation in fault
Inhibition during maintenance function

INPUT MEASUREMENT:
1 flammable, toxic gas or oxygen detector per channel
Up to 5 CO detectors per channel (parking garage version)
Loop line resistance
Flammable, 3 wire: 16 Ω (500 m of cables, 1.5 mm_2)
4-20 mA, 2 wire: 32 Ω (1,000 m of cables, 1.5 mm_2)

SIGNAL OUTPUT:
4-20 mA per channel, load resistance 600 Ω max.

DIMENSIONS:
29.5 cm x 34 cm x 10.7 cm (11.61" x 13.39" x 4.21")

WEIGHT:
5.48 kg (12.08 lb)

OPERATING TEMPERATURE:
-10°C to 50°C (14°F to 122°F)

The MX 42A gas and flame measurement and alarm control unit ensures the safety of your personnel working in environments which may contain explosive or toxic gases.

The MX 42A is connected to the corresponding detectors to efficiently solve your gas detection problems whether in industrial or commercial applications.

The control unit can accommodate one to four separate channels to provide a customized detection system.

Flexibility

The MX 42 A can be fitted with one detector per channel. The detection capability is tailored to your requirements and ensures effective detection and prevention. The alarm is triggered as soon as the value measured on one of the channels exceeds the corresponding setpoints.

The relay or relays activate alarms or secondary control systems. The third alarm threshold can be programmed for delayed or average value.

Enhanced ergonomics and performance

User-friendly
- Easy to program
- Wall-mounted housing
- Quick and easy to install
- Power supply: 230 VAC or 115 VAC and 24 VDC (48 VDC optional)

Clear messages
- Large LCD display unit
- Display in cyclic mode or direct mode by keypad
- Alarm status; faults indicated by LEDs

Three alarm levels
- 3 separate alarm levels per channel, pre-programmed in the factory and adjustable by the user
- Built-in relays to connect with fans and alarms

Optimal equipment
- 2 separate relays per channel on 1st or 2nd threshold
- Common relay in case of failure
- Analog output by measuring channel

Reliable control unit
- Protection against electromagnetic interference (EMI)
- Maintenance menu protected by access code
- Complete failure monitoring (detectors, control unit and line faults)
- Microprocessor-based design

ORDERING INFORMATION

PART #	DESCRIPTION
W42I420	MX42A, 230 VAC and 24 VDC
W42O420	MX42A, 230 VAC and 24 VDC, European Version
W42I410	MX42A, 110 VAC and 24 VDC
B103829	Wall-Mount Battery Backup System: uninterrupted power supply (289 x 350 x 189 mm) for MX32 and MX42. Charger 24V - 3 A - Batteries 7 Ah

- 1-2 Analog input channels
- On-board relays
- LED and audible alarms
- Continuous auto test
- Flexible programming

MX 32

SPECIFICATIONS

ALARMS:
2 independent alarm thresholds per channel
Individual programming, increasing or decreasing levels
Manual or automatic acknowledgement

VISUAL ALARM:
2 red LED + gas alarms per channel
1 yellow LED fault per channel

AUDIBLE ALARM:
Buzzer

RELAYS:
2 gas alarm relays per channel, One common relay for faults
Type of contact: N.O. or N.C., programmable by jumpers

IP RATING:
IP 66

BRIDGE TYPE DETECTOR CONNECTION:
1 detector: maximum distance 300 m (3 x 1,5 mm^2)
2 detectors: utilization of a junction box (Please consult us)

DETECTOR CONNECTION WITH TRANSMITTER:
One to five 2-wire detectors, 4-20 mA
One 3-wire detector, 4-20 mA
Cable 3 x 1.5 mm^2 (32 Ω max. in loop mode)

FIRE DETECTOR CONNECTION:
One to five detectors: cable 2 x 0.65 mm^2

FLAME DETECTOR CONNECTION:
One 3-wire detector
Cable 3 x 1.5 mm^2 (4.8 Ω max. in loop mode)

WEIGHT:
1.75 kg (3.86 lb)

OPERATING TEMPERATURE:
-20°C to 55°C (-4°F to 131°F)

RELATIVE HUMIDITY:
5% to 95% RH

APPROVALS:
Complies with EMC and low-voltage directives

ORDERING INFORMATION

PART #	DESCRIPTION
W32I22I	MX32 for Industrial Applications - 2 channels, 230 VAC
W32O22I	MX32 for Industrial Applications - 2 channels, 230 VAC, European Version
W32I21I	MX32 for Industrial Applications - 2 channels, 110 VAC
B103829	Wall-Mount Battery Backup System: uninterrupted power supply (289 x 350 x 189 mm) for MX32 and MX42. Charger 24V - 3 A - Batteries 7 Ah

- 1 Analog input channel
- 3 On-board relays
- LED and audible alarms
- Continuous self-test
- Control up to 5 detectors

MX 15

SPECIFICATIONS

DIMENSIONS:
18.5 cm x 15.7 cm x 6.7 cm (7.28" x 6.18" x 2.64")

OPERATING TEMPERATURE:
-10°C to 45°C (14°F to 131°F)

SENSORS:
- 1 flammable gas detector OLC 10 or 2 detectors OLC 10 TWIN for detection of methane, butane, propane in boiler rooms and LPG, natural gas for vehicles
- 1 flammable gas transmitter OLCT 10 for detection of methane, butane, propane in boiler rooms and LPG, natural gas for vehicles
- 1 to 5 similar detectors type OLCT 10 for detection of CO, NO, NO_2 in parking garages

DISPLAY:
Liquid Crystal Display, 4 digits and user-friendly symbols

VISUAL INDICATIONS:
4 LEDs –
1 green: "Power On"
1 orange: "Failure"
2 red: alarms "Alarm 1" and "Alarm 2"

GAS AND UNIT:
Selectable from a preprogrammed list

ALARMS & RELAYS:
2 programmable and independent levels, decreasing or increasing alarms, latching or unlatching modes, local or remote acknowledgment
2 alarm relays normally energized, selectable normally open or normally closed (de-energized on request at the factory)
1 fault relay, normally energized
Relay ratings : 2A at 250 Volts AC or 30 Volts DC

APPROVALS
ATEX 94/9/CE Directive:
- Category 3G (flammable gas detection metrology EN61779-1 and EN61779-4)

Low Voltage Directive:
- EN61010

EMC: EN50270

ORDERING INFORMATION

PART #	DESCRIPTION
W15I120	One Channel Controller Type MX 15, 230 VAC
W15O120	One Channel Controller Type MX 15, 230 VAC, European Version
W15I110	One Channel Controller Type MX 15, 110 VAC
6797127	Wall-Mount Battery Backup System: (322 x 248 x 126 mm) for MX15. Charger 24V - 1 A - Batteries 7 Ah

- Uses advanced, wireless technology
- Reduced costs, faster installations
- Flexible sensor placement
- Interference-free reliability

Using Industrial Scientific's proven, reliable, fixed-point gas monitors, the Wireless Information Transmission, System, adds an advanced wireless technology to eliminate extensive wiring – reducing costs and adding almost unlimited flexibility. The system uses a unique frequency-hopping transmission signal to ensure that the monitors and controllers are in constant communication with each other.

This spread-spectrum signal, operating at a frequency of 902-928 MHz, is not restricted by FCC operating licenses and, because it uses thousands of different signal patterns, it ensures virtually interference-free, digital reliability.

SPECIFICATIONS

General specifications for WIT System™ transceiver, and receiver/repeater

ENCLOSURE:
Fiberglass, NEMA 4X, or classified areas

DIMENSIONS:
26.7 cm x 21.6 cm x 15.9 cm (10.5" x 8.5" x 6.25")

OPERATING ENVIRONMENT:
Temperature: -40°C to 50°C (-40°F to 122°F)
Humidity: 5 to 95% RH (non-condensing)

OPERATING VOLTAGE:
24 VDC or 100-240 VAC

POWER CONSUMPTION:
170 mA receive (typical)
350 mA receive (max peak) at 1 W transmission

TRANSMIT POWER:
1 W

SPREADING CODE:
Frequency-hopping

OPTIONS

LIGHTING ARRESTOR:
Surge: 50kA IEC 1000-4-5 8/20µs waveform 500 Joules
Turn-on: 600 VDC120% 2.5ns for 2kV/ns
1,200 VDC120% 7ns for 2kV/ns
Vibration: 1G up to 100 Hz
Throughput energy: #220µJ (N-Male bulkhead connector)
Frequency range: 125 MHz to 1,000 MHz
Maximum power: 300 MHz to 1 GHz, up to 50 W

SOLAR POWER BATTERY BACKUP SYSTEMS*:
100-Watt System w/Single Battery
(1-2 sensors, one remote alarm, 3-5 days battery backup)
80-Watt System w/Dual Batteries
(2-3 sensors, one remote alarm, 3-5 days battery backup)
80-Watt System w/Single Battery
(1-2 sensors, one remote alarm, 3-5 days battery backup)
40-Watt System w/Single Battery
(1 sensor, one remote alarm, 3-5 days battery backup)

**Solar systems include solar panels, battery enclosure with charging circuit, battery/batteries and pipe mounting brackets. (Steel pile, sensors and/or remote alarm not included). WIT Systems™ are application driven. For further details about how a WIT System™ can best serve you, please contact Industrial Scientific Corporation at 1-412-788-4353. An applications engineer is available to assist you with the completion of an application survey.*

ORDERING INFORMATION

PART #	DESCRIPTION
78104718	RF900 Control Transceiver
78104726	RF900 Receiver/Repeater

PERIMETER MONITORING OPTIONS

Mobile Push Cart System

Permanent Pole Mount

iTrans™ ACCESSORIES

PART #	DESCRIPTION
77015741	(c) Calibration Cup for Infrared Sensor
77014579	(e) By-Pass/Flow-thru Kit (not for infrared sensor)
77015303	(f) Splash Guard/Remote Cal Cup for Toxic, O_2 and LEL
77018083	Replacement Filter for 77015303
77020063	(b) Splash Guard/Remote Cal Cup for Infrared Sensor
77019644	Replacement Filter for 77020063
77024065	iTrans Calibration Wand
77023588	(a) iTrans Splash Guard
77023513	(d) iTrans Calibration Cup

iTrans™ MOUNTING KITS

PART #	DESCRIPTION
78104312-STND	Duct Mount Kit for iTrans Catalytic/Toxic/Oxygen
78104312-IR	Duct Mount Kit for iTrans Infrared

REMOTE SAMPLE PUMPS FOR iTrans AND AirAware

PART #	DESCRIPTION
78104130	Remote Sample Pump 24 VDC Operation
78104122	Remote Sample Pump 120 VAC Operation
77008118	Replacement Coalescing Filter Element
17045642	Stainless Steel Metal Insert for Compression Fitting (for use with plastic tubing)
77003580	Optional 3-way Valve for Calibration (stainless steel)
77004810	Optional Flash Arrestors
77014629	Replacement Diaphragm Kit

POWER SUPPLIES

PART #	DESCRIPTION
78101151	Model 6510 Power Supply Standard 110 VAC to 24 VDC, 50 W output
78104809-80	Model 6520 Power Supply, 24 VDC, 80 W output
78104809-120	Model 6520 Power Supply, 24 VDC, 120 W output
78104809-240	Model 6520 Power Supply, 24 VDC, 240 W output
78101169	Model 6565 140 W Offline-type UPS w/Internal 24 VDC, 50 W output
78101581	Model 6580 400 W/800 W Peak Battery Backup System
78101581-2	Model 6580 400 W/800 W Peak Battery Backup System (2 Batteries)
78101581-3	Model 6580 400 W/800 W Peak Battery Backup System (3 Batteries)

iTrans™ REPLACEMENT SENSORS

PART #	DESCRIPTION
77024453	Ammonia Sensor
77024438	Carbon Monoxide Sensor
77024479	Chlorine Sensor
77024511	Chlorine Dioxide Sensor
77024446	Hydrogen Sensor (ppm)
77024461	Hydrogen Chloride Sensor
77025898	Hydrogen Cyanide Sensor
77024420	Hydrogen Sulfide Sensor
77024404	LEL Catalytic Sensor
77024487	Nitric Oxide Sensor
77024495	Nitrogen Dioxide Sensor
77024412	Oxygen Sensor
77025872	Phosphine Sensor
77024503	Sulfur Dioxide Sensor
77027944	Carbon Monoxide (H_2 Null)
77014314-MI1	LEL Infrared (IR) Methane calibration; Channel 1
77014314-MI2	LEL Infrared (IR) Methane calibration; Channel 2
77014314-PI1	LEL Infrared (IR) Propane calibration; Channel 1
77014314-PI2	LEL Infrared (IR) Propane calibration; Channel 2

REMOTE ALARMS ALARM MODULES (NEMA 4X TYPE ENCLOSURE)

PART #	DESCRIPTION
77016632	(g) 24 VDC Audio/Visual Alarm Red Lens
77016640	24 VDC Audio/Visual Alarm Amber Lens
77016657	24 VDC Audio/Visual Alarm Clear Lens
68100296	Alarm Indicating Station, 24 VAC Audio/Visual Alarm
68100304	Alarm Indicating Station, 24 VDC Audio/Visual Alarm
68100312	Alarm Indicating Station, 120 VAC Audio/Visual Alarm
78100054	(h) 120 VAC Audio/Visual Remote Alarm w/Silence Switch
78100070	(h) 24 VDC Audio/Visual Remote Alarm w/Silence Switch
78100146	120 VAC Audio Remote Alarm w/o Silence Switch
78100161	24 VDC Audio Remote Alarm w/o Silence Switch
77016814	12 /24 VDC Banshee Alarm

EXPLOSION-PROOF ALARMS

PART #	DESCRIPTION
T77030666	24 VDC A/V Alarm, Red, ATEX EX II
T77030674	24VDC, A/V Alarm, Red, Class 1 Div 2
T77030682	24 VDC A/V Alarm, Red, Class 1, Div1
T77030690	24 VDC A/V Alarm, Red, non classified
T77030708	Audible Alarm, ATEX EX II
T77030716	Audible Alarm, Class 1, Div 1
T77030724	Audible Alarm, Class 1, Div 2 (horn)
T77030732	Audible Alarm, ATEX EX II (horn)
T77030740	Strobe, Red, Class 1, Div 2
T77030757	Strobe, Red, Class 1, Div 1
T77030765	Strobe, Red, non-classified, Industrial

ACCESSORIES FOR OLCT 20, 40, 50, 60 80

PART #	DESCRIPTION
6123716	Sunshield for 300/50/60/80
6147869	Tool Kit for OLC(T) 20
6147870	Tool Kit for OLC(T) 50
6155651	Adjustment magnet for OLCT 60
6513539	Calibration Bench type CALIBRO
6797100	Zener Barrier to be mounted in cabinet
6184703	Zener Barrier to be mounted on DIN rail
6797192	Casing for 2 zener barriers
6797547	Casing for 5 zener barriers
6323627	Wall Mounting Gas Collector for OLC(T) 50
6323626	Ceiling Gas Collector for OLCT 40
6323628	Ceiling Gas Collector for OLC(T) 50
6329014	Reinforced Splash Guard Kit for OLC(T) 20/40/50/60/80
6329004	Splash Guard Kit for OLC(T) 20/40/50/60/80
6331137	Calibration Cup for O_2/CO/H_2S/NO/H_2
6331141	Calibration Cup for combustible gases
6121619	Mounting Kit for OLCT 20
6335976	Active Carbon Filter for OLCT
6335975	PTFE Water Barrier for OLC(T) 20
6343500	Cable-Gland Kit for OLCT 50/60 (M25, non armoured cable, brass)

OLCT IR ACCESSORIES

PART #	DESCRIPTION
6313829	Calibration Cup for OLCT IR
6313858	Sunshield for OLCT IR
6313862	Dust and Splash Guard
6313863	Calibration Cup & Remote Sampling Cup for OLCT IR
6313946	Insect Guard for OLCT IR

ACCESSORIES FOR OLCT 10, CTX/CEX

PART #	DESCRIPTION
6123717	Shock-Guard Protector for OLC(T)10 & 300 Series
6313539	Junction Box for connection of 2 sensors to one channel
6321359	Splash Guard for CEX/CTX 300
6322420	CEX/CTX 300 Ceiling-Mount
6323607	Gas Collector for 300 Series
6327905	Remote Sampling Cup for CEX/CTX 300 & OLC(T) 10
6327906	Remote Calibration Cup for CEX/CTX 300
6331141	Calibration Cup for Combustible Gases
6335953	PTFE Water Barrier for CEX/CTX 300

REPLACEMENT SENSORS FOR OLC, OLCT, CEX, CTX

PART #	DESCRIPTION
6513312	Catalytic C for CEX 800
6513368	Catalytic Sensor for CEX 810 - CEX 870
6513388	High temperature Catalytic Sensor for CEX 810 - CEX 870 HT
6792629	Catharometric Sensor for CEX 810 - CEX 870, 0-100% vol
6313662	Catalytic Sensor for CEX 300
6313757	Catalytic Sensor for OLC 20
6313995	Catalytic Sensor for OLC 20, 0-100% LEL butadiene/acetylene
6313759	Catharometric Sensor for OLC 20, 0-100% vol CH_4
6313988	Catharometric Sensor for OLC 20, 0-100% vol H_2
6313758	Poison Resistant Catalytic Sensor for OLC 20
6313714	Poison Resistant Catalytic Sensor for OLC 20 Chlorine-Anti Poison. For chlorinated products (not effective with methane detection)
6313741	Catalytic Sensor for OLC 50
6314005	Catalytic Sensor for OLC 50, 0-100% LEL butadiene/acetylene
6313761	Catharometric Sensor for OLC 50, 0-100% vol CH_4

REPLACEMENT SENSORS FOR OLC, OLCT, CEX, CTX

PART #	DESCRIPTION
6313983	Catharometric sensor for OLC 50, 0-100% vol H_2
6313742	Poison resistant sensor for OLC 50
6313744	Poison resistant catalytic sensor for OLC 50 Chlorine-Anti Poison. For chlorinated products (not effective with methane detection)
6313689	High temperature catalytic sensor for OLC 20D HT/OLC 50D HT
6313685	Combustible gases, 0-100% LEL sensor block for FLP OLCT 20/40/50/60 80
6313872	Combustible gases, 0-100% LEL, butadiene/acetylene for FLP OLCT 20/50/60/80
6313686	Comb. gases, 0-100% LEL, poison resistant sensor for OLCT 20/40/50/60/80
6313715	Poison resistant catalytic sensor for OLCT 20/40/50/60/80 Chlorine-Anti Poison. For chlorinated products (not effective with methane detection)
6313687	Catharometric sensor for OLCT 20/40/50/60/80, 0-100% vol CH_4
6313986	Catharometric sensor for OLCT 20/40/50/60/80, 0-100% vol H_2
6313369	O_2 sensor for MX 11 - CTX 50 - CTX 100 - CTX 200
6313585	O_2 sensor 0-30% for 2042
6313754	O_2 sensor for CTX 300
6313660	O_2 special sensor for CTX 300
6313710	O_2 0-30% vol sensor block for FLP OLCT 20/50/60/80
6313748	O_2 0-30% vol sensor block for IS OLCT 20/50/60/80
6313446	NH_3 sensor 0-100 ppm (3 NH_3 S)
6313524	NH_3 snesor 0-1,000 ppm (3 NH_3 S)
6313656	NH_3 sensor 0-100 ppm for CTX 300
6313657	NH_3 sensor 0-1,000 ppm for CTX 300
6313893	NH_3 sensor, 0-5,000 ppm for CTX 300
6313567	NH_3 sensor, 0-1,000 ppm for 2042
6313688	NH_3 0-5,000 ppm (Catalytic) sensor block for OLCT 20 FLP
6313666	NH_3 0-5,000 ppm (Catalytic) sensor for CEX 300
6313760	NH_3 0-5,000 ppm (Catalytic) sensor for OLC 20
6313707	NH_3 0-100 ppm sensor block for FLP OLCT 20/50/60/80
6313708	NH_3 0-1,000 ppm sensor block for FLP OLCT 20/50/60/80
6313894	NH_3 0-5,000 ppm sensor block for FLP OLCT 20/50/60/80
6313728	NH_3 0-100 ppm sensor block for IS OLCT 20/50/60/80
6313729	NH_3 0-1,000 ppm sensor block for IS OLCT 20/50/60/80
6313895	NH_3 0-5,000 ppm sensor block for IS OLCT 20/50/60/80
6113319	CO sensor 0-100 or 0-300 or 0-1,000 ppm for CTX
6797574	CO sensor 0-100 or 0-300 or 0-1,000 ppm (3 EF) for CTX
6113308	CO sensor 0-10 % (3 H) for CTX
6793285	CO sensor (H_2 null) for CTX

PART #	DESCRIPTION
6313551	CO sensor, 0-100 ppm for 2042
6313579	CO sensor, 0-1,000 ppm for 2042
6313970	CO sensor, 0-300 ppm for OLCT 10
6313615	CO sensor, 0-500 ppm, CTX 300 for parking garages
6313627	CO sensor, 0-100 ppm for CTX 300
6313628	CO sensor, 0-300 ppm for CTX 300
6313629	CO sensor, 0-1,000 ppm for CTX 300
6313631	CO sensor, 0-1% for CTX 300
6313632	CO sensor, 0-10% for CTX 300
6313690	CO 0-100 ppm sensor block for FLP OLCT 20/50/60/80
6313691	CO 0-300 ppm sensor block for FLP OLCT 20/50/60/80
6313692	CO 0-1,000 ppm sensor block for FLP OLCT 20/50/60/80
6313693	CO (H_2 null) 0-1,000 ppm sensor block for FLP OLCT 20/50/60/80
6313694	CO (H_2 null) 0-1,000 ppm sensor block for IS OLCT 20/50/60/80
6313711	CO 0-100 ppm sensor block for IS OLCT 20/50/60/80
6313712	CO 0-300 ppm sensor block for IS OLCT 20/50/60/80
6313713	CO 0-1,000 ppm sensor block for IS OLCT 20/50/60/80
6113320	H_2S sensor, 0-30 or 0-100 or 0-1,000 ppm (3 H) for CTX
6313554	H_2S sensor, 0-100 ppm for 2042
6313576	H_2S sensor, 0-1000 ppm for 2042
6313633	H_2S sensor, 0-30 ppm for CTX 300
6313634	H_2S sensor, 0-100 ppm for CTX 300
6313635	H_2S sensor, 0-1,000 ppm for CTX 300
6313695	H_2S 0-30 ppm sensor block for FLP OLCT 20/50/60/80
6313965	H_2S (HC null) 0-30 ppm sensor block for FLP OLCT 20/50/60/80
6313696	H_2S 0-100 ppm sensor block for FLP OLCT 20/50/60/80
6313697	H_2S 0-1,000 ppm sensor block for FLP OLCT 20/50/60/80
6313716	H_2S 0-30 ppm sensor block for IS OLCT 20/50/60/80
6313717	H_2S 0-100 ppm sensor block for IS OLCT 20/50/60/80
6313718	H_2S 0-1,000 ppm sensor block for IS OLCT 20/50/60/80
6795577	NO /NO sensor, 0-100 ppm or 0-300 ppm or 0-1,000 ppm for CTX
6313555	NO sensor, 0-100 ppm for 2042
6313578	NO sensor, 0-1,000 ppm for 2042
6113331	NO sensor, 0-100 ppm for OLCT10
6313636	NO sensor, 0-100 ppm for CTX 300
6313637	NO sensor, 0-300 ppm for CTX 300
6313638	NO sensor, 0-1,000 ppm for CTX 300
6313698	NO 0-100 ppm sensor block for FLP OLCT 20/50/60/80

REPLACEMENT SENSORS FOR OLC, OLCT, CEX, CTX

PART #	DESCRIPTION
6313699	NO 0-300 ppm sensor block for FLP OLCT 20/50/60/80
6313700	NO 0-1,000 ppm sensor block for FLP OLCT 20/50/60/80
6313719	NO 0-100 ppm sensor block for IS OLCT 20/50/60/80
6313720	NO 0-300 ppm sensor block for IS OLCT 20/50/60/80
6313721	NO 0-1,000 ppm sensor block for IS OLCT 20/50/60/80
6795578	NO_2 sensor, 0-10 or 0-30 ppm (3 NDH) for CTX
6313556	NO_2 sensor, 0-30 ppm for 2042
6113332	NO_2 sensor, 0-30 ppm for OLCT 10
6313639	NO_2 sensor, 0-10 ppm for CTX 300
6313640	NO_2 sensor, 0-30 ppm for CTX 300
6313722	NO_2 0-10 ppm sensor block for IS OLCT 20/50/60/80
6313723	NO_2 0-30 ppm sensor block for IS OLCT 20/50/60/80
6791911	H_2 sensor, 0-2,000 ppm (3 HYT) for CTX
6113335	H_2 sensor, 0-3% (3 HYE) for CTX - TX 11
6313559	H_2 sensor, 0-2,000 ppm for 2042
6313560	H_2 sensor, 0-2% for 2042
6313650	H_2 sensor, 0-2,000 ppm for CTX 300
6313651	H_2 sensor, 0-2 % for CTX 300
6313706	H_2 0-2,000 ppm sensor block for FLP OLCT 20/50/60/80
6313727	H_2 0-2,000 ppm sensor block for IS OLCT 20/50/60/80
6113318	HCl sensor, 0-10 or 0-30 ppm (3 HL) for CTX - TX 11
6313511	HCl sensor, (3 HCIS) for CTX 50/100/200
6313564	HCl sensor, 0-30 ppm for 2042
6313582	HCl sensor, 0-100 ppm for 2042
6313652	HCl sensor, 0-30 ppm for CTX 300
6313653	HCl sensor, 0-100 ppm for CTX 300
6313730	HCl 0-30 ppm sensor block for IS OLCT 20/50/60/80
6313731	HCl 0-100 ppm sensor block for IS OLCT 20/50/60/80
6113321	SO_2 sensor, 0-10 or 0-30 ppm (3 ST) for CTX
6313557	SO_2 sensor, 0-10 ppm for 2042
6313577	SO_2 sensor, 0-100 ppm for 2042
6313646	SO_2 sensor, 0-10 ppm for CTX 300
6313647	SO_2 sensor, 0-30 ppm for CTX 300
6313648	SO_2 sensor, 0-100 ppm for CTX 300
6313724	SO_2 0-10 ppm sensor block for IS OLCT 20/50/60/80
6313725	SO_2 0-30 ppm sensor block for IS OLCT 20/50/60/80
6313726	SO_2 0-100 ppm sensor block for IS OLCT 20/50/60/80
6113323	Cl_2 sensor, 0-10 ppm (3 CLH) for CTX
6313558	Cl_2 sensor, 0-10 ppm for 2042
6313649	Cl_2 sensor, 0-10 ppm for CTX 300

PART #	DESCRIPTION
6314002	Cl_2 sensor, 0-30 ppm for CTX 300
6313734	Cl_2 0-10 ppm sensor block for IS OLCT 20/50/60/80
6113362	ETO sensor, 0-30 ppm 0-100 ppm (3ETO/C) for CT870/2042/200
6313561	ETO sensor, 0-30 ppm for 2042
6313645	ETO sensor, 0-30 ppm for CTX 300
6313746	ETO 0-50 ppm sensor block for IS OLCT 20
6313682	HCN sensor, 0-10 or 0-30 ppm (3 HN) for CTX
6313565	HCN sensor, 0-30 ppm (2042)
6313581	HCN sensor, 0-100 ppm (2042)
6313654	HCN sensor, 0-10 ppm for CTX 300
6313655	HCN sensor, 0-30 ppm for CTX 300
6313732	HCN 0-10 ppm sensor block for IS OLCT 20/50/60/80
6313733	HCN 0-30 ppm sensor block for IS OLCT 20/50/60/80
6313505	ClO_2 (chlorine dioxide) sensor (3), 0-3 ppm
6313562	ClO_2 sensor, 0-3 ppm for 2042
6313678	ClO_2 sensor, 0-1 ppm for CTX 300
6313740	ClO_2 0-3 ppm sensor block for IS OLCT 20/50/60/80
6313590	O_3 (ozone) sensor, (3 electrode) for CTX
6313572	O_3 sensor, 0-1 ppm for 2042
6313676	O_3 sensor, 0-1 ppm for CTX 300
6313735	O_3 0-1 ppm sensor block for IS OLCT 20/50/60/80
6313518	PH_3 (phosphine) sensor, 0-1 ppm (3) for CTX
6313569	PH_3 sensor, 0-1 ppm for 2042
6313677	PH_3 sensor, 0-1 ppm for CTX 300
6313737	PH_3 0-1 ppm sensor block for IS OLCT 20/50/60/80
6313583	ASH_3 sensor, 0-500 ppb for 2042
6313738	ASH_3 0-1 ppm sensor block for IS OLCT 20/50/60/80
6313571	SIH_4 sensor, 0-50 ppm for 2042
6313747	SIH_4 sensor, 0-50 ppm sensor block for IS OLCT 20
6313563	VCM sensor, 0-100 ppm for 2042
6313544	FS 24 SP for CTX 300 SC
6313545	FG 318 for CTX 300 SC
6313546	FG SOL 218 for CTX 300 SC
6313547	FS 14 SP for CTX 300 SC
6793464	SP 13 FIS for CTX 300 SC
6313772	Methylene Chloride or Methylene sensor block for FLP OLCT 20/40/50/60
6313773	R12 sensor block for FLP OLCT 20/40/50/60
6313774	R134A sensor block for FLP OLCT 20/40/50/60
6313775	VOCs (MOS) sensor block for FLP OLCT 20/40/50/60

Purchase and Service Options

Industrial Scientific offers more than just the highest quality instruments and accessories. In addition to our complete line of products, we're also pleased to offer outstanding auxiliary services such as reliable service and repair, comprehensive training, and an ongoing commitment to provide you with the information you'll need to safely enter a potentially dangerous environment.

OWNERSHIP SOLUTIONS

For temporary needs to long-term ownership, Industrial Scientific offers a variety of purchase and rental plans to meet your specific needs, time frame and budget. Adding maintenance or repair options to your plan can help keep your gas detection program on budget by eliminating unplanned expenses caused by damage or loss.

Rental/Hire

Industrial Scientific's rental program is ideal for customers who need additional monitors for special projects such as turnarounds or shutdowns, but don't want to purchase them. The program offers flexible rental periods and rates from weekly, monthly to long-term.

All of our instruments are available for rent, in any quantity, and are customized to fit your specific needs. They arrive calibrated and ready to use.

Purchase

Our products are available for purchase through our worldwide network of distributors. To find a local distributor, contact the closest regional office or visit our Distributor Locator online at ***www.indsci.com.***

Certified Pre-Owned

Industrial Scientific's Certified Pre-Owned Program delivers factory reconditioned instruments to you at discounts of up to 30% off of the list price. Instruments are shipped with new sensors, battery packs and a full warranty.

The DS2 provides automated instrument management and diagnostic functions.

REPAIR SOLUTIONS

Industrial Scientific designs and manufactures the highest quality gas detection equipment in the industry. But our commitment to quality doesn't end once the instruments are shipped. If your Industrial Scientific instrument does need to be repaired, there will be no compromise on quality and no guessing about what is covered under warranty since many of our portable instruments are "Guaranteed For Life."

Factory Repair

Industrial Scientific offers factory repair service at our U.S. headquarters as well as all worldwide office locations. Each factory service center offers fast turnaround and excellent value on any instrument repair and ensures that your instruments are repaired exactly to your specification. The latest instrument software upgrades are also provided at no cost. Call your local Industrial Scientific office for factory service and support, or go to ***www.indsci.com*** to download a factory repair form.

Mobile Services

Industrial Scientific Mobile Service Technicians are capable of performing all levels of calibration, maintenance and repairs on your equipment on-site at your facility.

With this program, instrument downtime is practically eliminated and there is no need to stock consumables or other replacement parts. And, all required maintenance documentation and record-keeping is completed for you after each visit.

MAINTENANCE SOLUTIONS

Industrial Scientific products are manufactured to provide unparalleled reliability and designed to be simple for the user to maintain. For customers with limited time, personnel or resources, several maintenance and repair programs are available to ensure your equipment is consistently maintained to factory standards and in optimum working condition.

Docking Station™

The DS2 Docking Station provides automated calibration, record-keeping and diagnostics to help you properly maintain your Industrial Scientific equipment. A cost-effective solution for managing one monitor or an entire fleet of monitors, the DS2 modules can be placed practically anywhere you use your equipment. See page 4•4 for information on Docking Station Start-Up Services offered by Industrial Scientific.

Extended Warranty Program

The Extended Warranty Program is designed to secure customers' cost of ownership for instruments with limited warranties (non-guaranteed for life equipment). This additional coverage extends the warranty to a full four years and must be purchased within the first six months of instrument ownership.

THE iNet™ SOLUTION

The iNet Instrument Network™ is a comprehensive solution for ownership, repair and maintenance of all your gas monitors. More than just an outsourcing option, iNet™ gives you better visibility into the effectiveness of your gas monitoring program by combining patented technology, automation and industry best practices.

What iNet™ Does

- Performs instrument bump tests, calibrations and data downloads
- Analyzes instrument data
- Generates scheduled reports so you can address unsafe conditions or at-risk behavior before problems happen
- Sends immediate alerts
- Identifies service requirements
- Automatically initiates an instrument exchange, replacement part or on-site repair service.

An All-inclusive Program

Equipment

- Instruments and accessories
- DS2 Docking Stations™, server and software
- Calibration gas replenishment
- All repair parts, labor* and freight

**Not applicable for iNet Parts™ Program*

Setup Services

- Installation, setup and testing of Docking Stations™, server and instruments
- Training
- Travel expenses

Continuous Monitoring

Industrial Scientific continuously checks your instrument fleet via the Internet.

Data Services

- Asset tracking by serial number
- Secure, off-site data storage
- Data analysis
- E-mail reports and alerts

iNet™ Pricing

A 48-month agreement locks in your pricing with no additional or hidden costs. Should your needs change, you can always update the agreement by adding instruments to your fleet.

See the special section in the front of this catalogue for more information about iNet™.

LOOK FOR THIS SYMBOL ON ALL COMPATIBLE INSTRUMENT PAGES

iNet READY

SOLUTIONS

- **Worry-free industrial and commercial installations for fixed-point monitoring**
- **Docking Station™ set-up and software installation**
- **Solar-powered installations**
- **Wireless installations**
- **Employee Instruction**
- **Custom, on-site evaluation**
- **Calibration & maintenance programs available**

Now, the same company that manufactured your quality gas detection equipment can provide installation services too. Industrial Scientific Start-Up and Commissioning Services can have your gas-detection program up and running quickly while eliminating the need for you to reassign employees or search for specialized technicians and contractors to perform installation and troubleshooting procedures.

Our Start-Up and Commissioning Services are available to you on-site, for Industrial Scientific fixed-point monitoring systems, solar and wireless applications, AirAware™ commercial and non-hazardous monitoring systems, and the Docking Station™, a calibration and management system for portable gas monitors.

Industrial Scientific's expertly trained technicians ensure that your systems are installed correctly and in proper operating order; we even provide the necessary training so that employees are never left guessing about proper maintenance and instrument calibrations.

Our Commissioning Services are easily customized for your company's specific needs – giving you the flexibility to create a program that works with your employees, resources, and budget.

And, of course, you also have the option of adding other convenient Industrial Scientific maintenance, calibration, leasing and on-site services to your gas-detection program.

Contact your local distributor or Industrial Scientific for a customized quote for your specific Start-Up and Commissioning needs.

DOCKING STATION™ COMMISSIONING SERVICES

Available for the Docking Station™, an automated calibration and maintenance station for Industrial Scientific portable gas monitors.

- All hardware installations and connections
- Any necessary instrument microprocessor updates
- All software configurations
- Operational testing
- End-user training

FIXED SYSTEMS TURNKEY SERVICES

Industrial Scienfic offers complete, custom solutions for flame and gas detection needs. Our team of engineers works directly with customers from system conception, design, installation, commissioning and servicing.

Each application is optimized for performance and cost. Each control system is fully documented and delivered ready for installation.

A full set of documentation is included with wiring diagrams, system layout, customized user manual, test reports, control unit programming, and user manuals for each flame detector and gas monitor. Our on-site service and commissioning guarantees that the system is up and running properly upon completion. Other after-sales services such as quarterly calibrations of the transmitters are also available from Industrial Scientific.

FIXED SYSTEMS COMMISSIONING SERVICES

Available for Industrial Scientific fixed-point, industrial monitoring systems and AirAware™ commercial monitors.

- Verify proper device terminations
- Controller programming
- Initial calibration
- Employee training
- Contractor coordination and logistics
- On-site project management

TRAINING SERVICES

How do electrochemical sensors work? What should you know about working with toxic gases? How will the most recent government regulations affect your daily operations? How can proper instrument maintenance make your instruments easier to use and more cost-efficient?

The Training Department at Industrial Scientific exists to provide valuable information to our customers or any interested company or individual. Our courses are designed to help seasoned veterans as well as newcomers and are informative, useful, educational and even enjoyable. Most important, our courses will give you a better understanding of the dangers associated with hazardous gas atmospheres and help you use our instruments more effectively and safely.

We offer comprehensive Gas Detection Seminars focusing on: gas hazards, sensor technology, calibration/maintenance, battery handling, instrument use, OSHA regulations, Permit Required Confined Spaces (CFR 29 191.146), and other government laws, as well as hands-on training.

Conducted by highly-qualified instructors, Industrial Scientific training courses are offered at our headquarters in Oakdale, Pennsylvania, Arras, France and several other convenient locations throughout the U.S. and Canada. We can even provide customized, on-site sessions tailored to meet your company's specific training needs.

We now offer competency certification for anyone attending our Gas Detection Made Easy™ courses. More than just a certificate of attendance, you are tested to ensure that you were effectively trained and will leave with a "Competent Person Certificate" as required in some regulatory standards.

For a complete list of course dates and availabilities, or for more information on customized sessions, contact our Training Department by e-mail **Training@indsci.com**, or visit our Web site at **www.indsci.com**.

Confined space simulator

FACE-TO-FACE TRAINING COURSES

Regular training ensures that workers will know how to safely evaluate and respond to gas hazards and confined space risks common in many industries. Industrial Scientific offers several classroom training programs developed by experts familiar with instrument applications, government regulations and monitoring techniques. The courses combine theory with hands-on exercises for a variety of gas detection topics outlined below.

Classes are held on-site or at regional locations throughout the year. Contact the nearest Industrial Scientific office or visit **www.indsci.com** for dates and locations.

Portable Instrument Operations Level Training
Designed to empower the gas monitor end-user with knowledge on all issues related to gas monitoring.

Portable Instrument Technician Level Training
Offered for individuals responsible for maintaining and repairing their Industrial Scientific equipment.

Confined Space Metering Class
This workshop is focused exclusively on safe applications in confined space environments. Every detail is covered in the classroom before applying that knowledge in our on-site confined space simulator.

Firefighter Awareness Class
Taught by firefighters, this course delivers practical information to educate firefighters on the hazards of gases in their profession.

T3 – Train the Trainer Course
This course was designed to train those responsible for training others in their organizations on gas monitoring issues. This course includes information on gas hazards, terms and technology, and instrument operation.

On-Site Custom Course
Contact one of our expert trainers to discuss your specific training and curriculum objectives. We will meet these objectives with a custom-designed program held at the location of your choice. With an On-Site Custom Course, you are in total control of the course content. The curriculum will be delivered to your specifications, and competency will be measured according to your standards.

PROFESSIONAL ONLINE TRAINING COURSES

Industrial Scientific's professional online training courses capture the classroom training experience in an online format. The courses combine video clips, voiceover narration and recommended reading assignments divided into convenient modules that are accessible 24 hours a day, seven days a week. The format allows students to learn on their own time at their own pace. Plus, being able to go back and review any course topic can help students achieve a more complete understanding of the subject matter.

Instrument Operation Courses

Courses in instrument operation are available for the MX6 iBrid™, iTX, GasBadge® Pro, GasBadge® Plus, M40 and DS2 Docking Station™. Detailed information is presented on everything from the proper use and operation of the instrument to specific topics like gas sensor technology and confined space entry procedures.

Firefighter Hazard Awareness Course

Designed and taught by fire service professionals, the course demonstrates how to detect gas hazards commonly encountered in this profession. There are 10 online modules in this course with a quiz at the end of each module. Students successfully completing the final exam at the end of the course will receive a competency certificate.

All professional online courses are available on Industrial Scientific's Web site at **http://www.indsci.com/services/onlinecourse.aspx.**

ONLINE INSTRUMENT TRAINING VIDEOS

Industrial Scientific offers free, online videos to provide a general overview of specific instruments, as well as their features and operation. These training tools combine video footage with voiceover to guide the viewer through topics like instrument menu navigation, remote sampling, datalogging and calibration. The videos are divided into several tutorials, which are indexed for easy navigation and reference.

Online training videos are available for the following gas detectors on Industrial Scientific's Web site at **http://www.indsci.com/services/training_vids.aspx**:

MX6 iBrid™	iTX	M40
ATX612	ATX620	TMX412
LTX310	MG140	T40 Rattler™

User manuals for Industrial Scientific instruments are available online at www.indsci.com

BOOKS AND GUIDES

PART #	DESCRIPTION
17046848	Confined Space Booklet (English)
17052520	Confined Space Booklet (Spanish)
16000029	Gas Detection Made Easy™ (Class Book)

TRAINING/MAINTENANCE VIDEOS

PART #	DESCRIPTION
16000055	DS2 (Video CD) English
17134545	MX6 (Video DVD)
16000039	iTX (VHS)
16000042	iTX (PAL)
16000047	iTX (VHS) Spanish
16000049	M40 (VHS) English/French/Spanish
16000050	M40 (Video CD) English/French/Spanish
16000045	T40 (VHS) English/Spanish
16000051	T40 (Video CD) English/Spanish
16000037	CO and the First Responder℠ (VHS)

START-UP/TIP CARDS

PART #	DESCRIPTION
17095795	iTX
17086745	T82
CO897	Carbon Monoxide Exposure Card
16000036	CO Investigation Card

TRAINING TUTORIALS

PART #	DESCRIPTION
16000041	iTX Interactive Training Tutorial (CD-ROM)
16000054	M40 Interactive Training Tutorial (CD-ROM)
16000020	ATX612 Interactive Training Tutorial (CD-ROM)
16000022	ATX620 Interactive Training Tutorial (CD-ROM)
17056219	TMX412 (ver 2.0) Training Tutorial (floppy)
17063611	TMX412 (ver 2.0) Operation Only (floppy)
16000024	LTX312 Interactive Training Tutorial (CD-ROM)
16000034	Carbon Monoxide Responder Training (CD-ROM)

Each day, Industrial Scientific Corporation receives hundreds of phone calls requesting information on everything from exposure limits to the definition of intrinsic safety. Remember, anytime you have a question involving monitoring or safety, simply call 1-412-788-4353, or visit our Web site at www.indsci.com.

Our customer service representatives helped us pull together a library of the questions we're asked most often. Use this section as a quick reference when you have a question. And, if you don't find your answer here, give us a call. There's never a charge for a question.

GLOSSARY OF OCCUPATIONAL SAFETY AND HEALTH TERMS

dB: Decibel – A unit used to measure the relative power of sound. A 3 dB increase in sound output power represents a doubling of the perceptible volume.

eV: Electron Volt – A measurement of energy equal to the amount of energy it takes to move 1 electron through 1 volt of potential.

IDLH: Immediately Dangerous to Life and Health – The maximum concentration of gas (in ppm) from which a worker could escape within 30 minutes without experiencing any escape-impairing or irreversible health effects.

LEL/LFL: Lower Explosive Limit/Lower Flammable Limit – The minimum concentration at which a gas will explode. A common unit of measurement is a percent of the LEL.

mA: Milliamp – A unit of electric current expressed in amperes. 4-20 mA signals are commonly used analog signals in industrial electronics, where 4 represents the lowest value, for instance 0 ppm, and 20 represents the maximum, for instance, 999 ppm.

PEL: Permissible Exposure Limit – Level of gas (in ppm) a worker can be exposed to 8 hours a day/ 40 hours a week for the rest of their life with no long term health effects.

PID: Photolonization Detector – An instrument that utilizes ultra-violet light energy to ionize and detect the presence of an unknown gas or vapor.

ppm: Part Per Million – A common unit of measurement for toxic gases. This term literally means one part out of one million possible parts.

TLV-STEL: Short Term Exposure Limit – The average amount of gas (in ppm) a worker can be exposed to in a 15 minute period with no long term health effects. This may occur 4 times a shift with one hour between 15 minute exposures.

TLV-TWA: Time Weighted Average – The average amount of gas (in ppm) a worker can be exposed to over a certain time period. This time is defined as 8 hours to represent a normal work day.

TLV: Threshold Limit Value – A term used to signify limits in gas exposure. TLV is used as a prefix for TWA and STEL.

UEL/UFL: Upper Explosive Limit/Upper Flammable Limit – The maximum concentration at which a gas will explode.

VAC: Volts Alternating Current – An electric current that reverses direction at regular intervals.

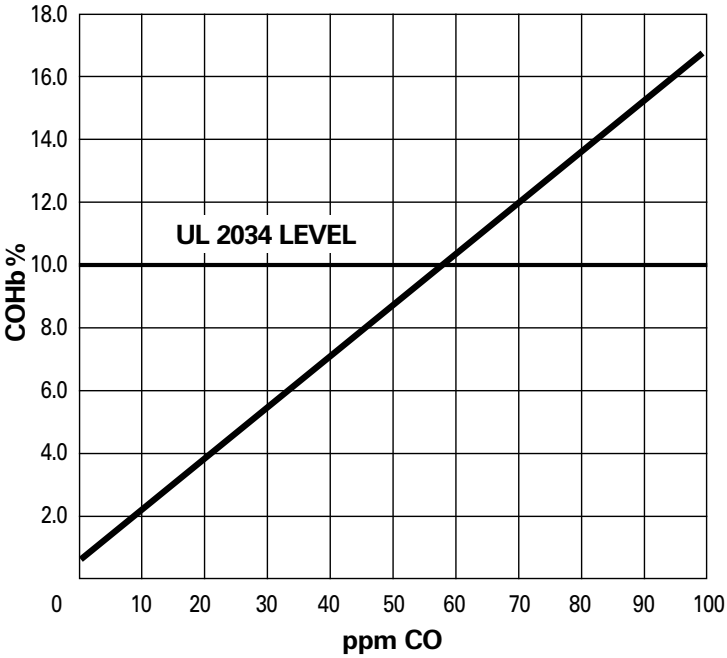
VDC: Volts Direct Current – An electric current of constant direction.

VOC: Volatile Organic Compound – Any compound containing carbon, except methane, that can be readily vaporized.

LOWER EXPLOSIVE LIMITS OF COMBUSTIBLE GASES

The following are the lower explosive limits of selected gases which should be useful:

Acetone	2.5% of volume
Acetylene	2.5% of volume
Benzene	1.2% of volume
Butane	1.9% of volume
Butyl Alcohol (Butanol)	1.4% of volume
Diethyl Ether	1.9% of volume
Ethane	3.0% of volume
Ethyl Alcohol (Ethanol)	3.3% of volume
Ethylene	2.7% of volume
Ethylene Oxide	2.7% of volume
Hexane	1.1% of volume
Hydrogen	4.0% of volume
Isopropyl Alcohol (Isopropanol)	2.0% of volume
Methane	5.0% of volume
Methyl Alcohol (Methanol)	6.0% of volume
Methyl Ethyl Ketone	1.4% of volume
n-Pentane	1.4% of volume
Propane	2.1% of volume
Propylene	2.0% of volume
Styrene	0.9% of volume
Toluene	1.1% of volume
Xylene	1.1% of volume



The carboxyhemoglobin level is a measure of the amount of Carbon Monoxide which has been absorbed into the blood stream. The chart converts the amount of Carbon Monoxide measured in the exhaled breath to the percentage carboxyhemoglobin level in the blood. The UL 2034 level (10% carboxyhemoglobin) depicted on the chart shows the average carboxyhemoglobin concentration after a fifteen minute exposure to 400 ppm Carbon Monoxide. At this exposure level, the average person will begin to experience the symptoms of Carbon Monoxide poisoning.

WEIGHT OF VARIOUS GASES COMPARED TO AIR

The following gases are lighter than air:

Acetylene
Ammonia
Carbon Monoxide
Ethylene
Hydrogen
Hydrogen Cyanide
Methane

The following gases are heavier than air:

Argon
Butane
Carbon Dioxide
Chlorine
Ethane
Hexane
Hydrogen Chloride
Hydrogen Sulfide
Methyl Ethyl Ketone
Methyl Mercaptan
Nitrogen Dioxide
Nitrous Oxide
Oxygen
Phosphine
Sulfur Dioxide
Propane

INTRINSIC SAFETY

What is intrinsic safety?

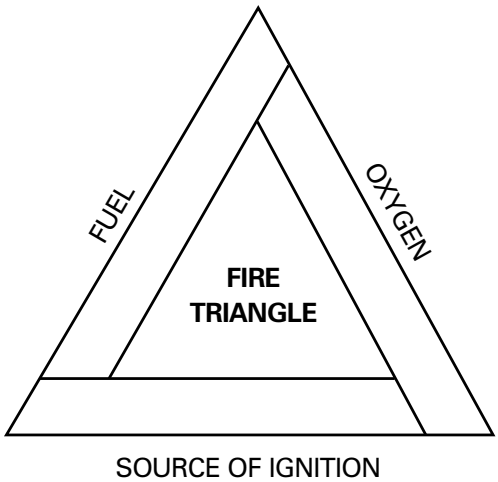
Intrinsic safety is a design technique applied to electrical equipment and wiring for hazardous locations. The technique is based on limiting energy, electrical and thermal, to a level below that required to ignite a specific hazardous atmospheric mixture.

How is intrinsic safety defined?

Intrinsically safe equipment and wiring shall not be capable of releasing sufficient electrical or thermal energy under normal or abnormal conditions to cause ignition of a flammable or combustible atmospheric mixture in its most easily ignitable concentration.

Who verifies intrinsic safety?

Equipment is tested and certified for intrinsic safety by independent third party agencies, such as Underwriters Laboratories (UL), Canadian Standards Association (CSA), Factory Mutual Research Corporation (FM) and the Mine Safety and Health Administration (MSHA). Independent testing ensures that your gas monitoring equipment is not only designed to be intrinsically safe, but meets all required standards for intrinsic safety.



Ref: R. Stahl – Intrinsic Safety Primer ©1988

National Electrical Code Article 504-2
Definition of a Intrinsically Safe Circuit © 1996

A circuit in which any spark or thermal effect is incapable of causing ignition of a flammable or combustible material in air under prescribed test conditions.

LEL CORRELATION FACTORS

The following chart outlines LEL correlation factors for combustible gas sensors installed in MX6, iTX, ATX Series, TMX412, LTX Series, LD322, M40, MG140 and 200 Series.

CALIBRATION GAS

GAS BEING SAMPLED

	Acetone	Acetylene	Butane	* Hexane	* Hydrogen	* Methane	* Pentane	* Propane
Acetone	1.0	1.3	1.0	0.7	1.7	1.7	0.9	1.1
Acetylene	0.8	1.0	0.7	0.6	1.3	1.3	0.7	0.8
Ammonia	0.5	0.7	0.5	0.4	0.9	0.8	0.4	0.5
Benzene	1.1	1.5	1.1	0.8	1.9	1.9	1.0	1.2
Butane	1.0	1.4	1.0	0.8	1.8	1.7	0.9	1.1
Ethane	0.8	1.0	0.8	0.6	1.3	1.3	0.7	0.8
Ethanol	0.9	1.1	0.8	0.6	1.5	1.5	0.8	0.9
Ethylene	0.8	1.1	0.8	0.6	1.4	1.3	0.7	0.9
Hexane	1.4	1.8	1.3	1.0	2.4	2.3	1.2	1.4
Hydrogen	0.6	0.8	0.6	0.4	1.0	1.0	0.5	0.6
Isopropanol	1.2	1.5	1.1	0.9	2.0	1.9	1.0	1.2
Methane	0.6	0.8	0.6	0.4	1.0	1.0	0.5	0.6
Methanol	0.6	0.8	0.6	0.5	1.1	1.1	0.6	0.7
Pentane	1.2	1.5	1.1	0.9	2.0	1.9	1.0	1.2
Propane	1.0	1.2	0.9	0.7	1.6	1.3	0.8	1.0
Styrene**	1.3	1.7	1.3	1.0	2.2	2.2	1.1	1.4
Toluene	1.3	1.6	1.2	0.9	2.1	2.1	1.1	1.3
Xylene	1.5	2.0	1.5	1.1	2.6	2.5	1.3	1.6
JP-4							1.2	
JP-5							0.9	
JP-8							1.5	

Example: The instrument has been calibrated on methane and is now reading 10% LEL in a pentane atmosphere. To find actual % LEL pentane, please multiply by the number found at the intersection of the methane column (calibration gas) and the pentane row (gas being sampled) … in this case, 1.9. Therefore, the actual % LEL pentane is 19% (10 x 1.9).

* Calibration gases available from Industrial Scientific.
** Values shown are theoretical and have not been verified through calibration gas testing.

SENSOR CROSS INTERFERENCE TABLE

GAS \ SENSOR	Carbon Monoxide	Hydrogen Sulfide	Sulfur Dioxide	Nitrogen Dioxide	Chlorine	Chlorine Dioxide	Hydrogen Cyanide	Hydrogen Chloride	Phosphine	Nitric Oxide	Hydrogen	Ammonia
Carbon Monoxide	100	2	1	0	0	0	0	0	0	0	20	0
Hydrogen Sulfide	10	100	1	-8	-3	-25	200	60	3	10	20	10
Sulfur Dioxide	0	10	100	0	0	0	—	40	—	0	0	-40
Nitrogen Dioxide	-20	-20	-100	100	12	—	-70	—	—	30	0	0
Chlorine	-10	-20	-25	90	100	20	-20	6	-10	0	0	0
Chlorine Dioxide	—	—	—	—	20	100	—	—	—	—	—	—
Hydrogen Cyanide	15	10	50	1	0	0	100	35	1	0	30	5
Hydrogen Chloride	3	0	0	0	2	0	0	100	0	15	0	0
Phosphine	—	—	—	—	—	—	0	300	100	—	—	—
Nitric Oxide	10	1	1	0	—	—	-5	45	—	100	30	50
Hydrogen	60	0.05	0.5	0	0	0	0	0	0	0	100	0
Ammonia	0	0	0	0	0	0	0	0	0	0	0	100

The table above reflects the percentage response provided by the sensor listed across the top of the chart when exposed to a known concentration of the target gas listed in the left hand column. Note: This table is given as a guide only and is subject to change.

— No data available

COMMON CHEMICAL NAMES AND SYMBOLS

Ammonia	NH_3	Hydrogen Fluoride	HF
Arsine	AsH_3	Hydrogen Sulfide	H_2S
Benzene	C_6H_6	Methane	CH_4
Bromine	Br_2	Nitric Acid	HNO_3
Carbon Dioxide	CO_2	Nitric Oxide	NO
Carbon Monoxide	CO	Nitrogen	N_2
Chlorine	Cl_2	Nitrogen Dioxide	NO_2
Chlorine Dioxide	ClO_2	Oxygen	O_2
Ethylene Oxide	ETO	Ozone	O_3
Fluorine	F_2	Phosgene	$COCl_2$
Hydrogen	H_2	Phosphine	PH_3
Hydrogen Bromide	HBr	Silane	SiH_4
Hydrogen Chloride	HCl	Sulfur Dioxide	SO_2
Hydrogen Cyanide	HCN	Sulfuric Acid	H_2SO_4

HAZARDOUS GASES FOUND IN COMMON INDUSTRIAL ENVIRONMENTS

(All values listed are established by NIOSH unless otherwise noted.)

Ammonia: NH_3
Colorless toxic gas with a pungent suffocating odor
PEL/TWA: 25.0 ppm STEL: 35.0 ppm
IDLH: 500.0 ppm LEL: 15.0% of volume
- Fertilizer Plants
- Water and Wastewater Treatment Plants
- Refrigeration Facilities and Cold Storage
- Semiconductor Industry

Carbon Dioxide: CO_2
Colorless, odorless gas
PEL/TWA: 5,000.0 ppm STEL: 30,000.0 ppm
IDLH: 40,000.0 ppm
- Breweries and Wineries
- Carbonated Beverage Bottling Plants
- Food Processing Plants
- Landfills

Carbon Monoxide: CO
Colorless, odorless gas – most abundant toxic gas
OSHA PEL/TWA: 50.0 ppm NIOSH PEL/TWA: 35.0 ppm
STEL: 400.0 ppm IDLH: 1,200.0 ppm
LEL: 12.5% of volume
- Fire Fighting
- Steel Mills
- Mining and Minerals
- Parking Garages

Chlorine: Cl_2
Green-yellow gas with a pungent, irritating odor
PEL/TWA: 0.5 ppm STEL: 1.0 ppm
IDLH: 30.0 ppm
- Pulp and Paper Mills
- Water Treatment Plants
- Swimming Pools and Chlorinization Plants
- Nuclear Reactors

Chlorine Dioxide: ClO_2
Red-yellow or orange-green, irritating odor
PEL/TWA: 0.1 ppm STEL: 0.3 ppm
IDLH: 5.0 ppm
- Pulp and Paper Mills
- Wastewater Treatment Plants

Hydrogen: H_2
Colorless, odorless gas
PEL/TWA: No limit set by OSHA STEL: N/A
IDLH: No limit set by NIOSH LEL: 4% by volume
- Chemical Manufacturing
- HazMat Operations
- Power Generation

Hydrogen Chloride: HCl
Colorless to slight yellow corrosive gas with a pungent, irritating odor
OSHA PEL/TWA: 5.0 ppm STEL: N/A
LEL: 12.5% of volume IDLH: 50.0 ppm
- Vinyl Production
- Cotton Production
- Petroleum and Gas Wells
- Steel Manufacturing

Hydrogen Cyanide: HCN
Colorless toxic gas with a bitter, almond-like odor
OSHA PEL/TWA: 10.0 ppm ACGIH PEL/TWA: 4.7 ppm
STEL: 4.7 ppm IDLH: 50.0 ppm
LEL: 5.6% of volume
- Gold Plating Industries
- Precious Metal Mining and Recovery
- Nylon Manufacturing

Hydrogen Sulfide; H_2S
Colorless toxic gas with a strong odor of rotten eggs
PEL/TWA: 10.0 ppm STEL: 15.0 ppm
IDLH: 100.0 ppm LEL: 4.0% of volume
- Oil Fields and Refineries
- Mining and Metals Industries
- Paper Mills and Leather Tanneries
- Water Treatment and Sewer Maintenance

Nitric Oxide: NO
Colorless toxic gas
PEL/TWA: 25.0 ppm STEL: N/A
IDLH: 100.0 ppm
- Diesel Emissions
- Underground Mining
- Agriculture – Silos
- Semiconductor Plants

Nitrogen Dioxide: NO_2
Reddish-brown toxic gas with a pungent odor
PEL/TWA: 3.0 ppm STEL: 5.0 ppm
IDLH: 20.0 ppm
- Boilers and Furnaces
- Diesel Emissions
- Underground Mining
- Semiconductor Plants

Ozone: O_3
Colorless, blue gas with a very pungent odor
PEL/TWA: 0.1 ppm STEL: 0.3 ppm
IDLH: 5.0 ppm
- Wastewater Treatment Plants
- Power Generation
- Welding

Phosphine: PH_3
Colorless gas, garlic-like odor
PEL/TWA: 0.3 ppm STEL: 1.0 ppm
IDLH: 5.0 ppm LEL: 1.79% of volume
- Pesticides-Agricultural Fumigant
- Doping Agent

Sulfur Dioxide: SO_2
Colorless toxic gas with a pungent odor
PEL/TWA: 2.0 ppm STEL: 5.0 ppm
IDLH: 100.0 ppm
- Pulp and Paper Mills
- Coal Fired Generation Stations
- Water Treatment
- Circuit Board (Etching) Industry

HAZARDOUS GAS

INDUSTRY	Combustible Gases	O_2 Deficient /Enrichment	Ammonia (NH_3)	Carbon Dioxide (CO_2)	Carbon Monoxide (CO)	Chlorine (Cl_2)	Chlorine Dioxide (ClO_2)	Hydrogen (H_2)	Hydrogen Chloride (HCl)	Hydrogen Cyanide (HCN)	Hydrogen Sulfide (H_2S)	Nitric Oxide (NO)	Nitrogen Dioxide (NO_2)	Ozone (O_3)	Phosphine (PH_3)	Sulfur Dioxide (SO_2)	Volatile Organic Compounds (VOCs)
AGRICULTURE	■	■	■	■	■						■	■	■		■		
AVIATION	■	■		■	■												■
CHEMICAL	■	■	■		■	■		■	■		■	■	■			■	■
CONSTRUCTION	■	■			■						■	■	■				■
ELECTRIC UTILITIES	■	■			■						■			■		■	
FIRE SERVICE	■	■		■						■	■						■
FOOD & BEVERAGE PROCESSING	■	■	■	■	■				■	■	■				■		
GAS UTILITIES	■	■			■						■						
HAZMAT	■	■	■		■	■		■	■	■	■				■	■	■
IRON & STEEL PRODUCTION	■	■			■					■	■	■	■			■	■
MANUFACTURING	■				■				■								■
MARINE SHIPYARD	■	■		■	■						■						
MINING	■	■		■	■					■	■	■	■				
OIL & GAS PRODUCTION	■	■	■		■						■						■
PETROCHEMICAL	■	■	■		■						■						■
PAPER & PULP	■	■			■	■	■				■					■	■
PHARMACEUTICAL /RESEARCH LABS	■	■	■			■			■		■					■	■
POWER PLANTS	■	■			■			■			■					■	
PUBLIC WORKS	■	■			■						■	■	■	■		■	
WATER /WASTEWATER TREATMENT	■	■	■		■	■					■			■		■	■
WELDING	■	■			■				■			■	■	■			

PhotoIonization Detector (PID) Reference Chart

VOLATILE ORGANIC COMPOUNDS DETECTED BY A PID

10.6 eV lamp

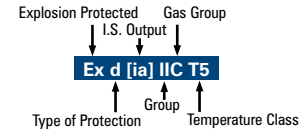
Acetaldehyde
(Acetic acid)
Acetic anhydride
Acetone
Acrolein
Acrylamide
Allyl alcohol
Allyl chloride
Allyl glycidyl ether
Allyl propyl disulfide
Amino pyridine
Amyl acetate
Aniline
Benzene
Benzyl chloride
Bromoform
Butadiene
Butoxyethanol
Butyl acetate
Butyl alcohol
Butyl mercaptan
Butylamine
Butyl glycidyl ether
Butyl toluene
Camphor vapor
Carbon disulfide
Chloroacetaldehyde
Chloroacetophenone
Chlorobenzene
Chloromethyl methyl ether
Chloronitropropane
Chloroprene
Chrysene
Cresol
Crotonaldehyde
Cumene
Cyclohexane
Cyclohexanol
Cyclohexanone
Cyclohexene
Cyclopentadiene
Di-ethylhexyl phthalate
Diacetone alcohol
Diazomethane
Dibutylphthalate
Dichlorobenzene
Dichloro ethyl ether
Dichloroethylene
Dichlorvos
Diesel
Diethylamino ethanol
Diethylamine
Diglycidyl ether
Diisobutyl ketone
Diisopropylanmine
Dimethylamine
Dimethylaniline
Dimethylformamide
Dimethylhydrazine
Dimethyloacetamide
Dimethylphthalate
Dinitrotoluene
Dinitro cresol
Dinitro analine
Dinitro benzene
Dioxane
Diphenyl
Dipropylene glycol methyl ether
(Epichlorohydrin)
(Ethanol)
Ethanolamine
Ethoxyethyl acetate
Ethyl acetate
Ethyl acrylate
Ethyl amyl ketone
Ethyl benzene
Ethyl bromide
Ethyl butyl ketone
Ethyl ether
Ethyl mercaptan
Ethyl silicate
Ethylamine
Ethylene dibromide
Ethylenediamine
Ethyleneimine
Furfural
Furfuryl alcohol
Gasoline
Glycidol
Heptane
Hexane
Hexanone
Hexone
Hexylacetate
Hydroquinone
Isoamyl acetate
Isobutyl acetate
Isobutyl alcohol
Isophorone
Isopropyl acetate
Isopropyl alcohol
Isopropyl ether
Isopropylamine
Isopropyl glycidyl ether
JP 4, 6, 8
Ketene
Mesityl oxide
Methyl acetate
Methyl acetylene
Methyl acrylate
Methyl amyl ketone
Methyl bromide
Methyl cellosolve acetate
Methyl ethyl ketone
Methyl hydrazine
Methyl iodide
Methyl mercaptan
Methyl methacrylate
Methyl styrene
Methylamine
Methylcyclohexane
Methylcyclohexone
Methylcyclohexanol
Monomethylaniline
Morpholine
Naphthalene
Naphthylamine
Nitroaniline
Nitrobenzene
Nitromethane
Nitrosodimethylamine
Nitrotoluene
Octane
Pentaborane
Pentane
Pentanone
Perchloroethylene
Phenol
Phenyl ether
Phenylene diamine
Phenylhydrazine
Propyl acetate
Propyl alcohol
Propylene dichloride
Propylene imine
Propylene oxide
Pyridine
Quinone
Stibine
Stoddard solvent vapor
Styrene
Terphenyls
Tetrachloroethylene
Tetrachloronaphthelene
Tetrahydrofuran
Tetramethyl lead
Toluene
Toluidine
Toner fluid vapor
Trichloroethylene
Triethylamine
Turpentine vapor
Vinyl chloride
Vinyl toluene
White spirit
Xylene

Not Detected by a PID

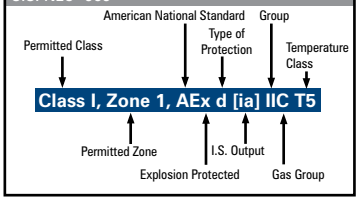
Acetonitrile
Carbon dioxide
Carbon monoxide
Ethane
Freons
Hydrogen
Hydrogen bromide
Hydrogen chloride
Hydrogen cyanide
Hydrogen fluoride
Methane
Nitric acid
Nitrogen
Oxygen
Ozone
Sulfur dioxide
Water

Ex Marking

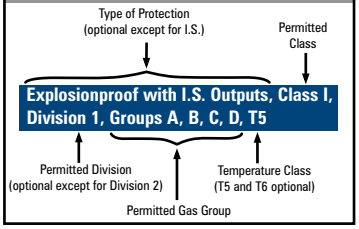
IEC



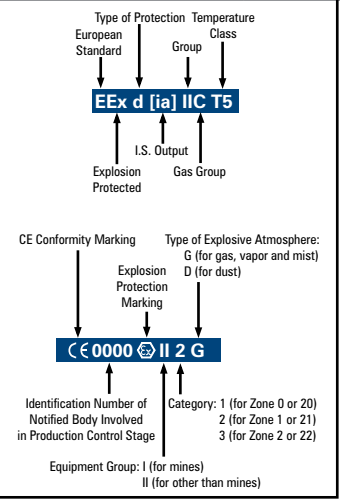
U.S. NEC®505



U.S. NEC®500



EU (Directive 94/9/EC) – ATEX (from July 1, 2003)



Types of Protection

Type of Protection	Code	Permitted Use	Standard	Protection Principle
Increased Safety	AEx e	Class I, Zone 1	FM 3600 (ISA 12.16.01*)	No arcs, sparks or hot surfaces
	EEx e	Zone 1	EN 50 019 (until July 2006) or EN 60079-7	
	Ex e	Zone 1	IEC 60079-7	
Non-Incendive	(NI)	Class I, Div 2	FM 3611	
Non-Sparking	AEx nA	Class I, Zone 2	FM 3600 (ISA 12.12.02)	
	EEx nA	Zone 2	EN 50 021	
	Ex nA	Zone 2	IEC 60079-15	
Explosionproof	(XP)	Class I, Div 1	FM 3615	Contain the explosion and extinguish the flame
Flameproof	AEx d	Class I, Zone 1	FM 3600 (ISA 12.22.01*)	
	EEx d	Zone 1	EN 50 018	
	Ex d	Zone 1	IEC 60079-1	
Powder-Filled	AEx q	Class I, Zone 1	FM 3600 (ISA 12.25.01*)	
	EEx q	Zone 1	EN 50 017	
	Ex q	Zone 1	IEC 60079-5	
Enclosed Break	AEx nC	Class I, Zone 2	FM 3600 (ISA 12.12.02)	
	EEx nC	Zone 2	EN 50 021	
	Ex nC	Zone 2	IEC 60079-15	
Intrinsic Safety	(IS)	Class I, Div 1	FM 3610†	Limit energy of sparks and surface temperature
	AEx ia	Class I, Zone 0	FM 3610†	
	AEx ib	Class I, Zone 1	FM 3610†	
	EEx ia	Zone 0	EN 50 020/39	
	EEx ib	Zone 1	EN 50 020/39	
	Ex ia	Zone 0	IEC 60079-11	
	Ex ib	Zone 1	IEC 60079-11	
Limited Energy	AEx nA	Class I, Zone 2	FM 3600 (ISA 12.12.02)	
	EEx nA	Zone 2	EN 50 021	
	Ex nA	Zone 2	IEC 60079-15	
	EEx nL	Zone 2	EN 50 021	
	Ex nL	Zone 2	IEC 60079-15	
Pressurized	Type X	Class I, Div 1	FM 3620	Keep flammable gas out
	Type Y	Class I, Div 1	FM 3620	
	Type Z	Class I, Div 2	FM 3620	
	EEx p	Zone 1	EN 50 016	
	EEx nP	Zone 2	EN 50 021	
	Ex px	Zone 1	IEC 60079-2	
	Ex py	Zone 1	IEC 60079-2	
	Ex pz	Zone 2	IEC 60079-2	
	Ex nZ	Zone 2	IEC 60079-15	
Restricted Breathing	AEx nR	Class I, Zone 2	FM 3600 (ISA 12.12.02)	
	EEx nR	Zone 2	EN 50 021	
	Ex nR	Zone 2	IEC 60079-15	
Encapsulation	AEx m	Class I, Zone 1	FM 3600 (ISA 12.23.01*)	
	EEx m	Zone 1	EN 50 028	
	Ex m	Zone 1	IEC 60079-18	
Oil Immersion	AEx o	Class I, Zone 1	FM 3600 (ISA 12.16.01*)	
	EEx o	Zone 1	EN 50 015	
	Ex o	Zone 1	IEC 60079-6	

Note 1: For associated intrinsically safe apparatus suitable for installation in a hazardous area, the symbols for the type of protection ia or ib are enclosed within square brackets, for example, AEx d[ia] IIC T4.

Note 2: For associated intrinsically safe apparatus not suitable for installation in a hazardous area, both the symbol Ex /AEx /EEx and the symbol for the type of protection ia or ib are enclosed within the same square brackets, for example, [AEx ia] IIC; In this case, a temperature class is not included.

**Also shall comply with ISA 12.00.01 † Based on ISA 12.02.01*

Area Classification

	Flammable Material Present Continuously	Flammable Material Present Intermittently	Flammable Material Present Abnormally
IEC/EU	Zone 0 (Zone 20 - dust)	Zone 1 (Zone 21 - dust)	Zone 2 (Zone 22 - dust)
U.S. NEC®505	Zone 0	Zone 1	Zone 2
NEC®500	Division 1		Division 2

IEC classification per IEC 60079-10
EU classification per EN 60 079-10
U.S. classification per ANSI/NFPA 70 National Electric Code (NEC) Article 500 or Article 505

Explosion Groups

Typical Gas/Dust/Fiber	U.S. (NEC®505) IEC EU	U.S. (NEC®500)
Acetylene	Group IIC	Class I/Group A
Hydrogen	(Group IIB + H_2)	Class I/Group B
Ethylene	Group IIB	Class I/Group C
Propane	Group IIA	Class I/Group D
Methane	Group I*	Mining*
Metal Dust	None	Class II/Group E
Coal Dust	None	Class II/Group F
Grain Dust	None	Class II/Group G
Fibers	None	Class III

**Not within scope of NEC. Under jurisdiction of MSHA.*

Temperature Class

Maximum Surface Temperature	U.S. (NEC®505) IEC EU	U.S. (NEC®500)
450° C	T1	T1
300° C	T2	T2
280° C		T2A
260° C		T2B
230° C		T2C
215° C		T2D
200° C	T3	T3
180° C		T3A
165° C		T3B
160° C		T3C
135° C	T4	T4
120° C		T4A
100° C	T5	T5
85° C	T6	T6

Ingress Protection (IP) Codes

First Number Protection Against Solid Bodies	Second Number Protection Against Liquid
0 No protection	No protection
1 Objects greater than 50 mm	Vertically dripping water
2 Objects greater than 12 mm	75° to 90° dripping water
3 Objects greater than 2.5 mm	Sprayed water
4 Objects greater than 1 mm	Splashed water
5 Dust-protected	Water jets
6 Dust-tight	Heavy seas
7	Effects of immersion
8	Indefinite immersion

Approximate U.S. Enclosure Type Equivalent to IPXX

Type →	IP	Type →	IP	Type →	IP
1	10	3S	54	6 and 6P	67
2	11	4 and 4X	55	12 and 12K	52
3	54	5	52	13	54
3R	14				

Acronyms

ATEX – Atmosphère Explosible
CENELEC – European Committee for Electrotechnical Standardization
EU – European Union
IEC – International Electrotechnical Commission
I.S. – Intrinsically Safe
MSHA – Mine Safety and Health Administration
NEC® – National Electric Code®

Classification of Gases and Vapours into EXPLOSION GROUPS and TEMPERATURE CLASSES

	T1	T2	T3	T4	T5	T6
I	Methane					
IIA	Acetone Ethane Ammonia Benzol (pure) Acetic acid Methane (natural gas) Methanol Propane Toluene	Ethanol i-Amyl acetate n-Butane n-Butyl alcohol	Benzene Diesel fuel Aircraft fuel Heating oil n-Hexane	Acetylaldehyde Ethylether		
II B	Coal gas (lighting gas)	Ethylene				
II C	Hydrogen	Acetylene				Carbon disulphide

Ref: • FM Approvals – Expert Guide to Hazardous Locations © 2004 FM Global Technologies LLC
• R. STAHL Inc. – Explosive Facts

6•1 Ordering Information

CUSTOMER SERVICE

Contact our Customer Service Department 24 hours a day by phone, fax or e-mail. Phone lines are handled by friendly, knowledgeable professionals 24 hours a day from 8 p.m. Eastern Time Sunday evening through 6 p.m. Friday evening. Your call will be answered by a real person, not an answering machine or an automated attendant with complicated menu selections. Please contact Industrial Scientific at:

Phone: 1-800-DETECTS (North America)
1-800-338-3287 (North America)
1-412-788-4353
Fax: 1-412-788-8353
e-mail: info@indsci.com

Also, information on products and services can be accessed on the Industrial Scientific Web site http://www.indsci.com.

Dealers and Distributors
Industrial Scientific has a worldwide network of stocking distributors anxious to handle your needs. Please contact Customer Service at 1-412-788-4353, e-mail info@indsci.com or use the Distributor Locator found on www.indsci.com for the distributors serving your local area.

Prices and Terms
Prices are subject to change without notice. Terms of payment are Net 30 Days with established credit. We also accept C.O.D., Visa, Mastercard and American Express orders.

Design Changes
Due to continuing improvements in design, some items may differ slightly from the description and photographs in the literature. All specifications are subject to change without notice. If you have questions, please contact Customer Service to discuss any design improvements and advantages.

AFTER-SALE SUPPORT

Warranty
Industrial Scientific designs and manufactures the highest quality instruments for the preservation of life and property. Our warranty statement GUARANTEED FOR LIFE is not just an empty promise; Industrial Scientific warrants all parts, including electronic components for the life of the instrument (consumable items excluded). (Covers most portable instruments – contact Industrial Scientific for additional warranty information.)

Warranty Registration
A postage-free warranty registration card is delivered with each instrument. This registration is a valuable step to ensure validation of warranty coverage. Or if you prefer, fax this information to 1-412-788-8353, or register your products online at www.indsci.com.

Repair Service
If repair or maintenance on any Industrial Scientific product is required, the Repair Service Center in Oakdale, PA, USA will accommodate your needs. Authorized Service Centers are also located in Australia, Canada, China, France, Germany, Netherlands, Saudi Arabia, Singapore and select regions of the United States.

Training
Monthly Gas Detection Made Easy™ seminars are presented by Industrial Scientific's experienced Training Department in a hands-on learning environment. Customer-site training is also available to meet your corporate needs for gas hazard education, confined space awareness and instrument training. Product training videos for users and supervisors are available in various formats for instrument operation, calibration and maintenance.

Catalog Requests
We would like to add you to the catalog mailing list. Please notify Customer Service if the mailing label is incorrect, or if you would like to be added to the list for future mailings.

Worldwide Operations

www.indsci.com

CORPORATE HEADQUARTERS

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++ Mobile Service Van/ Service Center

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Mumbai, India
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Jakarta, Indonesia*

MIDDLE EAST

Doha, Qatar*
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