

OVERSEAS NETWORK



PORTABLE GAS DETECTORS

PRODUCT GUIDE



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SAFETY WARNING

Read the operating instructions thoroughly before use. Always operate in accordance with the instructions.

Be sure to choose the sensor designed to detect the required type of gas. Use of the wrong sensor type could cause an accident.

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PORTABLE GAS DETECTOR **XP-3110**

For measurement of combustible gas concentration of 0-10/0-100% LEL.

XP-3110-
Please make your specification
by filling in the type of a gas.
Ex: Methane, Isobutane, Propane,
Ethanol, Hydrogen, Acetylene, etc.



- FEATURES**
- For measurement of combustible gas concentration of 0-10/0-100%LEL.
 - Suitable for monitoring a risk of explosion.
 - New digital display with a simulated analog scale.
 - Built-in correction factors for up to 5 flammable gases. (factory option)

SPECIFICATIONS	
Model	XP-3110
Gas Detected	Combustible gases and vapors (specify gas to be detected)
Detection Principle	Catalytic combustion
Sampling Method	Extractive
Detection Range	0-100%LEL
Indication Accuracy (Under identical conditions)	±5% of full scale
Alarm Set Value	20%LEL
Display	LCD digital (with backlight)
	Digital display: 0-100%LEL
	Digital bar display: Auto range changeover 0-10%LEL (L range)
	0-100%LEL (H range)
Alarm Indication	Gas alarm: Intermittent buzzer, Red lamp flashing
	Trouble alarm: Buzzer, Red lamp flashing, LCD display
Explosion-Proof Structure	Exibd II CT3
Operation Temperature	−20 to 50°C
Power Source	4×AA alkaline dry cells
Battery Life *1	Up to 20 hours
Dimensions	W82×H162×D36mm
Weight	Approx. 450g (16oz.) (excluding batteries)
Standard Accessories	Soft case, 4×AA alkaline dry cells, Gas sampling hose (1m), Probe with filter/moisture trap, spare filters
Optional Accessories	2-30m gas sampling hose, Gas dilution probe, Data download software (CD-ROM software and USB cable)

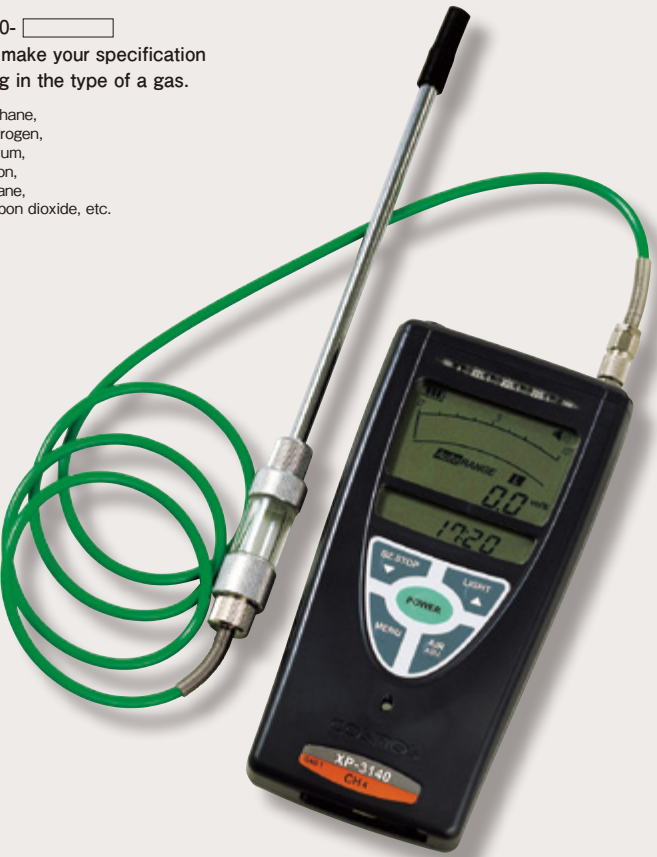
*1 Battery life may vary with ambient conditions, conditions of use, storage period, battery manufactures, etc.

ATEX CCOE Type approved by Class NK (NK)
No.06T605 (Designation required)

COMBUSTIBLE GAS DETECTOR **XP-3140**

For measurement of high concentration gases up to 100vol%.

XP-3140-
Please make your specification
by filling in the type of a gas.
Ex: Methane, Hydrogen, Helium, Argon, Butane, Carbon dioxide, etc.



- FEATURES**
- For measurement of high concentration gas up to 100vol%.
 - Suitable for inspecting the amount of gas remaining in tanks.
 - Extended battery life of up to 30 hours.

SPECIFICATIONS	
Model	XP-3140
Gas Detected	Methane, Propane, Argon, Carbon dioxide, etc. (specify gas to be detected)
Detection Principle	Thermal conductivity
Sampling Method	Extractive
Detection Range	0-100vol%
Indication Accuracy (Under identical conditions)	H range: ±5% L range: ±10%
Alarm Set Value	50vol%
Display	LCD digital (with backlight)
	Digital display: 0-100vol%
	Digital bar display: Auto range changeover 0-10vol% or 0-30vol% (L range)
	0-100vol% (H range)
Alarm Indication	Gas alarm: Intermittent buzzer, Red lamp flashing
	Trouble alarm: Buzzer, Red lamp flashing, LCD display
Explosion-Proof Structure	Exibd II CT3
Operation Temperature	0 to 40°C
Power Source	4×AA alkaline dry cells
Battery Life *1	Up to 30 hours
Dimensions	W82×H162×D36mm
Weight	Approx. 450g (16oz.) (excluding batteries)
Standard Accessories	Soft case, 4×AA alkaline dry cells, Gas sampling hose (1m), Probe with filter/moisture trap, spare filters
Optional Accessories	2-30m gas sampling hose, Gas dilution probe, Data download software (CD-ROM software and USB cable).

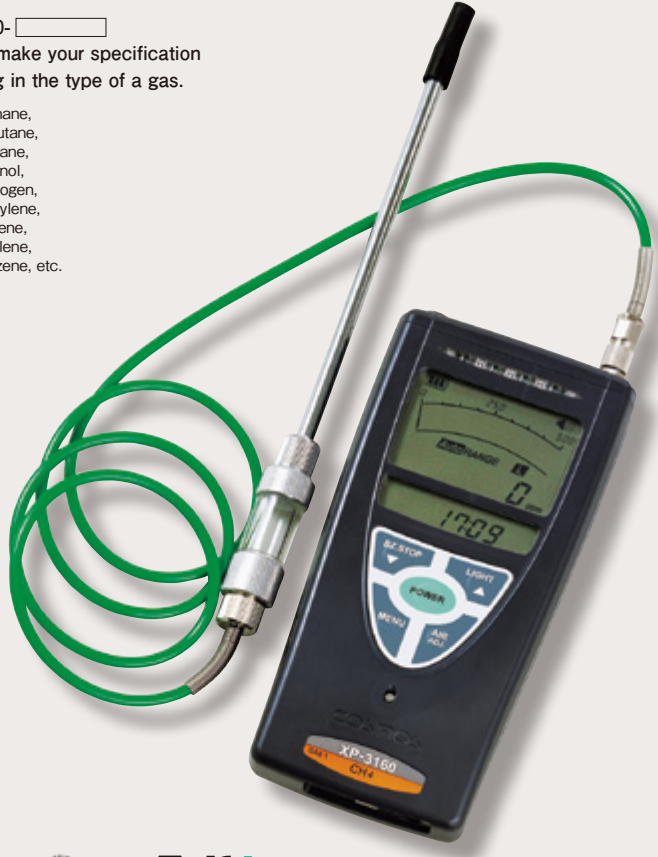
*1 Battery life may vary with ambient conditions, conditions of use, storage period, battery manufactures, etc.

ATEX CCOE Type approved by Class NK (NK)
No.06T605 (Designation required)

COMBUSTIBLE GAS DETECTOR **XP-3160**

Super-sensitive and best suited for detecting gases in ppm range.

XP-3160-
Please make your specification
by filling in the type of a gas.
Ex: Methane, Isobutane, Propane, Ethanol, Hydrogen, Acetylene, Toluene, o-Xylene, Benzene, etc.



- FEATURES**
- High sensitivity detector with 0-500ppm measuring range (Standard).
 - Best suited for measuring combustible gases in the ppm range.
 - Lightweight 450g (16 oz.) and compact.
 - Built-in correction factors for up to 5 flammable gases. (factory option)

SPECIFICATIONS	
Model	XP-3160
Gas Detected	Combustible gases and vapors (specify gas to be detected)
Detection Principle	Catalytic combustion
Sampling Method	Extractive
Detection Range	0-5,000ppm or 0-10,000ppm
Indication Accuracy (Under identical conditions)	H range: ±5% L range: ±10%
Alarm Set Value	250 or 500ppm
Display	LCD digital (with backlight)
	Digital display: 0-5,000ppm or 0-10,000ppm
	Digital bar display: Auto range changeover 0-500ppm or 0-1,000ppm (L range)
	0-5,000ppm or 0-10,000ppm (H range)
Alarm Indication	Gas alarm: Intermittent buzzer, Red lamp flashing
	Trouble alarm: Buzzer, Red lamp flashing, LCD display
Explosion-Proof Structure	Exibd II CT3
Operation Temperature	−20 to 50°C
Power Source	4×AA alkaline dry cells
Battery Life *1	Up to 20 hours
Dimensions	W82×H162×D36mm
Weight	Approx. 450g (16oz.) (excluding batteries)
Standard Accessories	Soft case, 4×AA alkaline dry cells, Gas sampling hose (1m), Probe with filter/moisture trap, spare filters
Optional Accessories	2-30m gas sampling hose, Gas dilution probe, Data download software (CD-ROM software and USB cable).

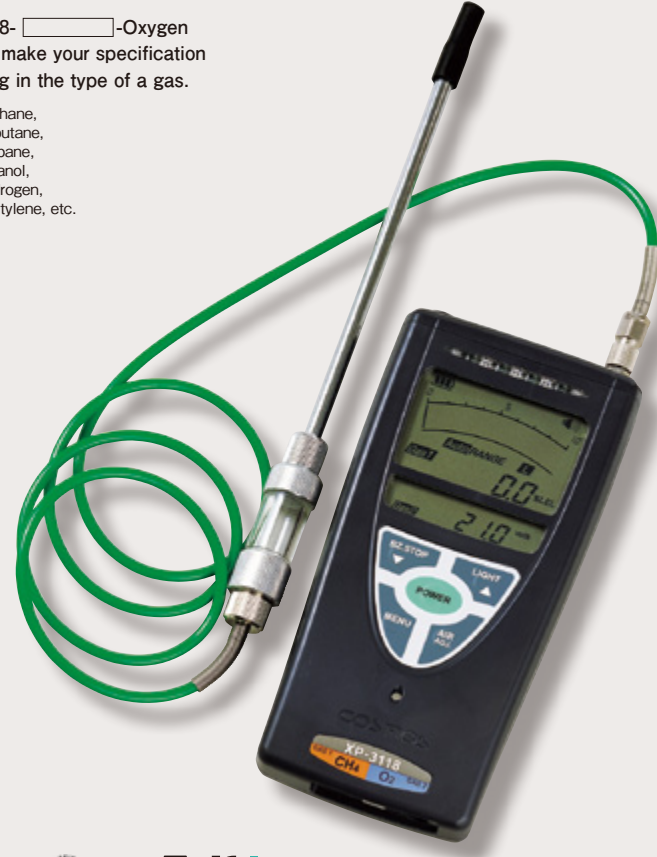
*1 Battery life may vary with ambient conditions, conditions of use, storage period, battery manufactures, etc.

ATEX CCOE Type approved by Class NK (NK)
No.06T605 (Designation required)

MULTI-GAS DETECTOR **XP-3118**

Simultaneous displays combustible gas and oxygen concentration.

XP-3118- -Oxygen
Please make your specification
by filling in the type of a gas.
Ex: Methane, Isobutane, Propane, Ethanol, Hydrogen, Acetylene, etc.



- FEATURES**
- Simultaneous monitoring of combustible gas and oxygen concentration.
 - Perfect for compliance work, safety and environmental monitoring.
 - Powerful built-in pump allows sample-draws up to 30 meters.

SPECIFICATIONS		
Model	XP-3118	
Gas Detected	Combustible gases and vapors (specify gas to be detected)	Oxygen
Detection Principle	Catalytic combustion	Galvanic cell
Sampling Method	Extractive	
Detection Range	0-100%LEL	0-25.0vol%
Indication Accuracy (Under identical conditions)	±5% of full scale value	±0.3vol% (Compliant with JIS T 8201)
Alarm Set Value	20%LEL	18.0vol%
Display	LCD digital (with backlight)	
	Digital display	
	Digital bar display	
Alarm Indication	Gas alarm: Intermittent buzzer, Red lamp flashing	
	Trouble alarm: Buzzer, Red lamp flashing, LCD display	
Explosion-Proof Structure	Exibd II BT3	
Operation Temperature	0 to 40°C	
Power Source	4×AA alkaline dry cells	
Battery Life *1	Up to 20 hours	
Dimensions	W82×H162×D36mm	
Weight	Approx. 450g (16oz.) (excluding batteries)	
Standard Accessories	Soft case, 4×AA alkaline dry cells, Gas sampling hose (1m), Probe with filter/moisture trap, spare filters	
Optional Accessories	2-30m gas sampling hose, Gas dilution probe, Data download software (CD-ROM software and USB cable).	

*1 Battery life may vary with ambient conditions, conditions of use, storage period, battery manufactures, etc.

ATEX CCOE Type approved by Class NK (NK)
No.06T605 (Designation required)

GAS LEAK DETECTOR **XP-702 III**

Extractive Type Combustible gas detector



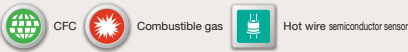
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FEATURES

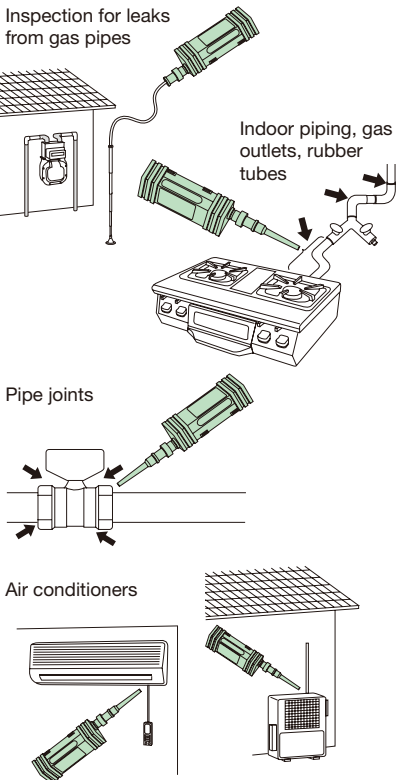
- Smaller and Lighter
- Easy-to-See LCD Display
- Two Alarm Lamps
- Trace Gas can be Detected
- Capable of Detecting 2-Gas

SPECIFICATIONS

Model	XP-702III-A	XP-702III-B	XP-702III-F
Target Gas	2 combustible gas gas (switchable)	1 combustible gas	CFC & Combustible (switchable)
Detection Principle	Hot-wire semiconductor		
Detectable Leak Rate	Town gas, LPG, etc.: 3.3 × 10-6Pa.m3/s CFCs: (R407C) 12.4g/year (R410A) 11.2g/year		
Detectable Concentration	10 ppm (CFCs: 30ppm)		
Response Time	Within 3 seconds (except for CFCs)		
Power Source	2 × Size AA alkaline battery (LR6)		
Battery Life	Approx. 12 hours (with size AA alkaline batteries at 25 degrees C)		
Explosion-proof Structure	Ex ia II BT3 (intrinsically safety)		
Operating Temperature/Humidity	-20 to 50 degrees C, less than 85% RH (non condensing)		
Dimensions	Approx. 38 (W) × 130 (H) × 32 (D) mm (excluding protrusions)		
Weight	Approx. 190g (including batteries and soft case)		
Standard Accessories	Soft case, Drain filter, Filter element, Gas probe, Dust filter, Hand strap, 2 × AA alkaline batteries, Instruction Manual		
Optional Accessories	Annealed copper tube, Gas collector, Sampling hose, etc.		



USAGE EXAMPLES



CART TYPE GAS DETECTOR **XP-707 II**

Cart Type high performance gas detector



FEATURES

- Compact storage.
- Available to monitor in low gas concentration. (from 0-30ppm range)
- Auto-zero adjustment function.
- Self-diagnosis function.
- Available to adjust alarm sound loudness.

SPECIFICATIONS

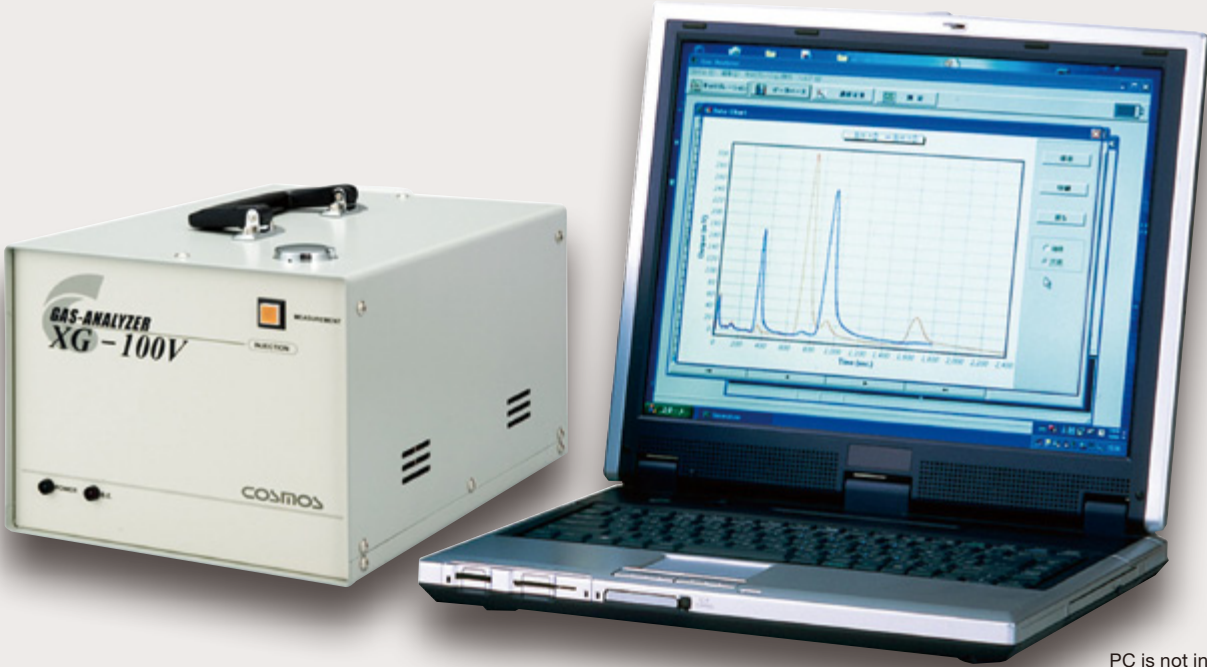
Model	XP-707 II
Gas Detected	Natural gas (CH4 based)
Detection Principle	Methane selective hot wire semiconductor
Sampling method	Diffusion
Detection Range	0-30ppm, 0-100ppm, 0-10,000ppm (3 ranges: S, L, H)
Alarm Set Value	L/H range: 20ppm (intermittent sound), 100ppm (continuous sound) S range: 0-30ppm (intermittent sound)
Response time	Approx. 7s (90% response)
Alarm Indication	(Gas detection) By gas concentration indicator. Buzzer sound changes from intermittent to continuous when gas concentration exceeds alarm set value. (Sensor malfunction) Flash left lamp for gas concentration indication. Intermittent buzzer sound. *Sensor and pump are stopped automatically. (Pump malfunction) Flash right lamp for gas concentration indication. *Sensor and pump are stopped automatically.
Operating Temperature	0 to 40°C
Power Source	4 × D alkaline dry cells or D manganese dry cells
Battery life *1	Up to 80 hours (alkaline dry cells) Up to 20 hours (manganese dry cells)
Form	Cart type (Simple drip-proof structure)
Dimensions	W245 × H1125 × D435mm W245 × H790 × D280mm (in case of storage)
Weight	Approx. 4.9 kgs. (including batteries)

*1 Battery life may vary with ambient conditions, conditions of use, storage period, battery manufactures, etc.



PORTABLE VOC ANALYZER **XG-100V**

Portable VOC Analyzer



PC is not included.

FEATURES

- High precision measurement
 - High separation performance by optimization of sensor and column.
 - The gas of indicator value class is used for calibration gas.
 - Correlate highly with the official method.
- Field measurement
 - Reduction in size and weight.
 - Display the measurement results immediately.
- Simple operation
 - Skip enrichment activity.
 - Store the measurement results automatically in a database.

SPECIFICATIONS

Model	XG-100V
Substance Measured	Toluene, xylene, ethyl benzene, styrene
Measurement Range	Minimum detection limit: 4 μg/m ³ , 1ppb Maximum detection limit: 3700 μg/m ³ , 1000ppb
Repeatability	Within ±5% (RSD) (Toluene 70ppb)
Carrier Gas	Atmospheric air
Sample Injection Method	Direct injection by syringe (sample volume: 10ml)
Operating Temperature	5 to 35 degrees C
Power Source	100V AC, 50/60Hz
Dimensions	240 (W) × 190 (H) × 380 (D) mm
Weight	Approx. 10kg
Standard Accessories	Data analysis software (hardware requirement: Windows XP), calibration gas, 3 × syringes for sample injection, AC power cable, RS232C cable, USB-RS232C conversion cable, 8 × C alkaline dry cells.

● VOC=Volatile Organic Compounds

Applications

Construction/ House

- VOC measurement under construction.
- Confirmation of lowering VOC before delivery.
- Inspection and check of architectural materials.
- Inspection and check of furniture.



Environmental Control

- Performance check of degassing device and filter.
- Monitor test of VOC low concentration.



Chemistry

- Development of low VOC adhesive and paint.
- Development of low VOC adsorbent.
- Development of various chemical materials.



Electrical equipment/ Machinery

- Inspection of home electric appliances.
- Inspection of business equipments.
- Development of deodorization equipment.



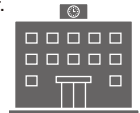
Automobile

- VOC measurement of car interior.
- Inspection of interior materials and parts.
- Condition check of chamber for measurement.
- Development of tires.



University/ Research institute

- Development of VOC decomposition catalyst.
- Development of VOC removal filter.
- Development of architectural materials.



PERSONAL OXYGEN INDICATOR **XO-2200**
COSMOS Personal Gas Monitor XX-2200 Series Oxygen indicator



(Actual size)

FEATURES

- Can be used continuously for 5000 hours.
- Available with loud buzzer, alarm lamp from 4 dimensions, peak hold function.
- Thin, lightweight design.

SPECIFICATIONS

Model	XO-2200
Gas Detected	Oxygen (O ₂)
Detection Principle	Galvanic cell
Sampling Method	Diffusion
Detection Range	0-25vol%
(Service Range)	(25-50vol%)
Resolution	0.1vol%
Indication Accuracy *1	Within ±0.5vol%
Alarm Set Value 1st stage	19.5vol%
2nd stage	18.0vol%
Response Time *2	20s or less
Display Mode	LCD (Manual backlight)
Alarm Mode	Buzzer sounds, flashing red light, vibrator
Functions	Remaining battery level, peak hold, memory of peak value, alarm functions except gas alarm (sensor malfunction, remaining battery level, air-adjustment malfunction)
Operation Temperature	−10°C to 40°C, 30 - 90%RH (non-condensing)
Operation Air Pressure	Air pressure ±10%
Power Source	1 × AAA alkaline dry cell (LR 03)
Battery Life *3	Up to 5000 hours (at 20°C without alarm)
Dimensions	W65×H64×D22mm (excluding protrusions)
Weight	Approx. 75g (including battery)
Standard Accessories	1 × AAA alkaline dry cell, 1 × safety pin adaptor (with fixing screw)

*1 Under identical measuring conditions.
*2 Assuming 90% response and operating at 20 ±2°C
*3 Battery life may vary with ambient conditions, conditions of use, storage period, battery manufactures, etc.

OXYGEN INDICATOR **XP-3180**
Extractive Type Oxygen indicator



Type approved by Class NK (NK)
No.06T605 (Designation required)

FEATURES

- Extractive type oxygen concentration indicator.
- Convenient for measuring oxygen concentration in containers where sampling is difficult.

SPECIFICATIONS

Model	XP-3180
Gas Detected	Oxygen
Detection Principle	Galvanic cell
Sampling Method	Extractive
Detection Range	0-25.0vol%
Indication Accuracy	±0.3vol%
(Under identical conditions)	(Compliant with JIS T 8201)
Alarm Set Value	18.0vol%
Display	LCD digital (with backlight) Digital bar display
Alarm Indication	Gas alarm: Intermittent buzzer, Red lamp flashing Trouble alarm: Buzzer, Red lamp flashing, LCD display
Explosion-Proof Structure	Exib II BT3
Operation Temperature	−10 to 40°C
Power Source	4×AA alkaline dry cells
Battery Life *1	Up to 100 hours
Dimensions	W82×H162×D36mm
Weight	Approx. 450g (16oz.) (excluding batteries)
Standard Accessories	Soft case, 4×AA alkaline dry cells, Gas sampling hose (1m), Probe with filter/moisture trap, Spare filters
Optional Accessories	2-30m gas sampling hose, Gas dilution probe, Data download software (CD-ROM software and USB cable).

*1 Battery life may vary with ambient conditions, conditions of use, storage period, battery manufactures, etc.

Conforms to JIS T 8201
Type approved by Class NK (NK)
No.06T606 (Designation required)



DIGITAL OXYGEN INDICATOR **XO-326IIs**
Digital oxygen indicator



5m Cable:
XO-326IIsA
XO-326IIsA-V
(Vibration)



1m Spiral Cable:
XO-326IIsB
XO-326IIsB-V
(Vibration)

FEATURES

- About 15000 Hours of Continuous Use
- Automatic Air Adjustment
- Replaceable Sensor

SPECIFICATIONS

Model	XO-326IIsA XO-326IIsA-V	XO-326IIsB XO-326IIsB-V	XO-326IIsC XO-326IIsC-V
Cable Length	5m	1m (spiral cable)	10m
Target Gas	Oxygen		
Detection Principle	Galvanic cell		
Sampling Method	Diffusion Type		
Detection Range	0 to 25.0 vol%		
(Service Range)	(25.1 to 40.0%)		
Indication Accuracy	Within +/−0.5vol%		
Display Resolution	0.1 vol%		
Alarm Set Value	1st stage: 19.5 vol% 2nd stage: 18.0 vol%		
Response Time	Within 20 seconds		
Alarm Function	Buzzer sounds, Red lamp blinks, LCD display blinks (latching), Vibration (for vibration specifications)		
Power Source	2 × size AA alkaline battery (LR6/ made by PANASONIC)		
Continuous Use	Approx. 15,000 hours		
Explosion-proof Structure	Ex ia II CT3 X (Japan)		
Protection Class	IP20 or equivalent		
Operating Temperature/ Humidity	−10 to 40 degrees C 30 to 85% RH (non condensing)		
Dimensions (mm) (excluding protrusions)	66(W) × 170(H) × 29(D)	66(W) × 120(H) × 29(D)	66(W) × 200(H) × 29(D)
Weight	Approx. 340g	Approx. 265g	Approx. 410g



10m Cable:
XO-326IIsC
XO-326IIsC-V
(Vibration)
XO-326IIsB-V
(Vibration)

Conforms to JIS T 8201
The Ship Equipment Inspection Society of Japan (HK) approved product
(Designation required)

PERSONAL CO DETECTOR **XC-2200**

COSMOS Personal Gas Monitor XX-2200 Series Carbon monoxide detector



(Actual size)

FEATURES

- Can be used continuously for 5000 hours.
- Available with loud buzzer, alarm lamp from 4 dimensions, peak hold function.
- Available with TWA (Time Weighted Average) gas concentration display, memory of peak value, and peak hold function.
- Thin, lightweight design.

SPECIFICATIONS

Model	XC-2200
Gas Detected	Carbon Monoxide (CO)
Detection Principle	Electrochemical cell
Sampling Method	Diffusion
Measuring Range (Service Range)	0-300ppm (300-2,000ppm)
Resolution	0-350ppm: 1ppm / 350-2,000ppm: 50ppm
Indication Accuracy *1	Within±30ppm
Alarm Set Value	50ppm (first stage), 150ppm (second stage), 150ppm·h (time weighted average)
Response Time *2	30s or less (90% of final reading)
Display Mode	LCD (Manual backlight)
Alarm Mode	Buzzer sounds, flashing red light, vibrator
Functions	Remaining battery level, peak hold, peak value memory, readout of time weighted average, alarm functions except gas alarm (time weighted average value, sensor malfunction, remaining battery level, zero-adjustment malfunction)
Operating Temperature	−10°C to 40°C, 30-90% RH (non-condensing)
Operating Air Pressure	Air pressure±10%
Power Source	1 × AAA alkaline dry cell
Battery Life *3	Up to 5,000 hours (at 20°C with less than 20ppm)
Dimensions	W65 × H64 × D22mm (excluding protrusions)
Weight	Approx. 75g (including battery)
Standard Accessories	1 × AAA alkaline dry cell, 1 × safety pin adaptor (with fixing screw)

*1 Under identical measuring conditions.
*2 Operating at 20 ±2°C.
*3 Battery life may vary with ambient conditions, conditions of use, storage period, battery manufactures, etc.



PERSONAL H2S DETECTOR **XS-2200**

COSMOS Personal Gas Monitor XX-2200 Series Hydrogen sulfide detector



(Actual size)

FEATURES

- Can be used continuously for 5000 hours.
- Available with loud buzzer, alarm lamp from 4 dimensions, peak hold function.
- Thin, lightweight design.

SPECIFICATIONS

Model	XS-2200
Gas Detected	Hydrogen Sulfide (H2S)
Detection Principle	Electrochemical cell
Sampling Method	Diffusion
Detection Range (Service Range)	0-30.0ppm (30.1-100ppm)
Resolution	0-35.0ppm: 0.1ppm 35-100ppm: 5ppm
Indication Accuracy *1	Within ±1.5ppm ±1digit
Alarm Set Value 1st stage	10.0ppm
2nd stage	15.0ppm
Response Time *2	30s or less
Display Mode	LCD (Manual backlight)
Alarm Mode	Buzzer sounds, flashing red light, vibrator
Functions	Remaining battery level, peak hold, memory of peak value, alarm functions except gas alarm(sensor malfunction, remaining battery level, air-adjustment malfunction)
Operation Temperature	−10°C to 40°C, 30-85%RH (non-condensing)
Operation Air Pressure	Air pressure ±10%
Power Source	1 × AAA alkaline dry cell
Battery Life *3	Up to 5,000 hours (at 20°C with less than 5 ppm)
Dimensions	W65 × H64 × D22mm (excluding protrusions)
Weight	Approx. 75g (including battery)
Standard accessories	1 × AAA alkaline dry cell, 1 × safety pin adaptor (with fixing screw)

*1 Under identical measuring conditions.
*2 Assuming 90% response and operating at 20 ±2°C.
*3 Battery life may vary with ambient conditions, conditions of use, storage period, battery manufactures, etc.



SEMICONDUCTOR GAS DETECTOR **XPS-7**

Gas detector for semiconductor manufacturing gases



How to replace the sensor unit



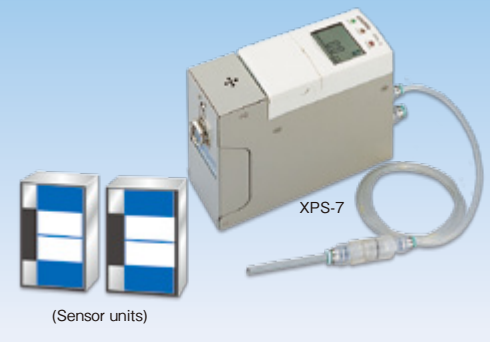
Lift the snap lock and open the sensor cover.



Remove the sensor unit and insert the new sensor unit. Close the sensor cover.



Option :XPS-7 & Sensor Units



(Sensor units)

Option : Sensor stocker model EC-7 (Up to 6 sensors)



● Use the sensor stocker to supply power to the sensor units.

FEATURES

- Detect a range of gases with a single gas detector by exchanging the sensor unit.
- Cassette-type sensor units eliminate the need for gas detector adjustment.

● List of Detected Gases

Type	Gas	Full Scale	Type	Gas	Full Scale	Type	Gas	Full Scale
XDS-7NH	NH ₃	100ppm	XDS-7GH	GeH ₄	1ppm	XDS-7HS	H ₂ S	50ppm
XDS-7SH	SiH ₄	25ppm	XDS-7CL	Cl ₂	5ppm	XDS-7CO	CO	250ppm
XDS-7DC	SiH ₂ Cl ₂	25ppm	XDS-7CF	ClF ₃	1ppm	XDS-7DS	Si ₂ H ₂	25ppm
XDS-7AH	AsH ₃	250ppb	XDS-7HC	HCl	25ppm	XDS-7F2	F ₂	5ppm
XDS-7PH	PH ₃	1ppm	XDS-7HF	HF	10ppm	XDS-7O2	O ₃	1ppm
XDS-7BH	B ₂ H ₆	500ppb	XDS-7HB	HBr	10ppm	XDS-7SO	SO ₂	10ppm
XDS-7SE	H ₂ Se	250ppb	XDS-7NO	NO	100ppm	XDS-7ND	NO ₂	10ppm

Contact us for information on gases not included in the table.

SPECIFICATIONS

Model	XPS-7
Detection Principle	Electrochemical cell
Gas Detected	Semiconductor manufacturing gases
Gas Sampling Method	Extractive
Detection Range	Depends on the specifications
Resolution	1/100 of full scale
Indication Accuracy	±10% of full scale
Alarm Mode	2nd stage alarm type
Alarm Indication	Intermittent buzzer, flashing lamp
Response Time	60s or less (60% response)
Operating Temperature	0 to 40°C
Power Source	4× AA alkaline dry cells (*2) or an AC adaptor
Battery Life (*2)	Up to 12 hours (by alkaline dry cells at 20°C without alarms)
Dimensions	W62×H150×D128mm (excluding protrusions)
Weight	Approx. 1.3kg
Standard accessories	Gas sampling hose with probe, shoulder strap, 4× AA alkaline dry cells, Spare filters
Optional Accessories	AC adaptor (100 VAC/6 VDC), sensor stocker, log data collection kit

*1 Under identical measurement conditions.
*2.Battery life may vary with ambient conditions, conditions of use, storage period, battery manufacturers, etc.

GAS LEAK DETECTOR **XP-703D**

Gas leak detector for semiconductor manufacturing gases



FEATURES

- Best suited for detecting trace leaks of semiconductor manufacturing gases.
- Detects gas leaks and alerts you by lamp and buzzer.

SPECIFICATIONS

Model	XP-703D				
Detection Principle	Hot wire semiconductor				
Sampling Method	Extractive				
Gas Detected	Semiconductor manufacturing gases (arsine, phosphine, diborane, silane, etc.)				
	arsine AsH ₃	phosphine PH ₃	diborane B ₂ H ₆	silane SiH ₄	hydrogen H ₂
Minimum Detectable Leak rate	1.0×10 ⁻⁷	1.5×10 ⁻⁷	0.5×10 ⁻⁷	2.5×10 ⁻⁷	5×10 ⁻⁷ Pa · m ³ /s
Minimum Detectable Concentration	0.2	0.3	0.1	0.5	1.0ppm
Response Time	10s or less				
Detection Indication	Intermittent buzzer and flashing lamp				
Power Source	4× AA (R6) manganese dry cells				
Battery Life	Up to 9 hours by alkaline dry cells (Up to 3 hours by manganese dry cells)				
Operating Temperature	0 to 40°C				
Dimensions	W68 × H155 × D32mm				
Weight	Approx. 400g				
Standard Accessories	Soft case, Probe with filter/moisture trap, Check gas, Standard attachment, 4× AA (R6) manganese dry cells, Spare filters				
Optional Accessories	Earphone				

MULTI-GAS DETECTORS

MULTI-GAS DETECTOR **XP-302M**

Oxygen/Combustible gas/Hydrogen Sulfide/Carbon Monoxide detector



FEATURES

- Compact and Lightweight.
- Large, blight display with auto-backlight.
- 4 gas simultaneous gas display.

SPECIFICATIONS

Model	XP-302M			
Gases Detected	Combustible Gas (Methane or LPG)	Oxygen	Hydrogen Sulfide	Carbon Monoxide
Detection Principle	Catalytic combustion	Galvanic cell	Electrochemical cell	Electrochemical cell
Gas Sampling Method	Extractive			
Measuring Range (Service range)	0-100%LEL	0-25.0vol% (25.1-50.0vol%)	0-30.0ppm (30.1-150ppm)	0-150ppm (151-300ppm)
Indication Accuracy (Repeatability)*1	< ±5%LEL	< ±0.5vol%	< ±1.5ppm	< ±10ppm to 100ppm < ±15ppm to 150ppm
Alarm Set	1st stage: 10%LEL	19.5vol%	10.0ppm	50ppm
Value	2nd stage: 30%LEL	18.0vol%	15.0ppm	100ppm
Response Time*2	with a 1m sampling hose with an 8m sampling hose	< 25 sec. < 20 sec.	< 30 sec.	< 30 sec.
Operating Temperature & Humidity	-10 to 40°C, 95% RH (non-condensing)			
Power Source	4 × AA alkaline dry cells			
Display	A large LCD with backlight provides simultaneous and continuous readout of all gases being monitored. 3 user-selectable display modes (standard display / graphic display / English display).			
Alarms	90+ dB buzzer, flashing LCD and warning lamp			
Battery Life	8+ hours on 4 × AA alkaline cells (20°C, no alarm, no backlight and datalogging OFF)			
Safety Design	Intrinsically safe design Exibd II BT3			
Functions	•Automatic backlight (in dim light or alarm condition) •Zero adjustment •Peak hold •Buzzer control •Low flow alarm •Datalogging function (up to 150 hours) •Buzzer stop •Alarm test •Display of remaining battery level, current time and temperature			
Dimensions	Approx. W152 × H152 × D42 mm			
Weight	Approx. 870g			
Standard Accessories	XP-302M-□-1* 1m sampling hose (Probe with filter/moisture trap, Spare filters) Soft case XP-302M-□-2* 8m sampling hose (with float), Soft case and carrying case XP-302M-□-3* Aluminum case*, 8m sampling hose (with float), An external alarm (with 8m cable) and AC adaptor XP-302M-□-4* Aluminum case**, 8m sampling hose with hose reel (with float), An external alarm with a cable reel (with 8m cable) and AC adaptor			
Optional Accessories*5	•Log data download software (for Windows 2000 or XP) •20m sampling hose for float •30m sampling hose for float			

*1 Under identical conditions *2 T90 *3 It depends on the environmental conditions, service conditions, storage period, and battery manufacturers *4 Non explosion-proof type *5 Please contact our dealers / distributors for available accessories

Ordering information

Model XP-302M- Specification code

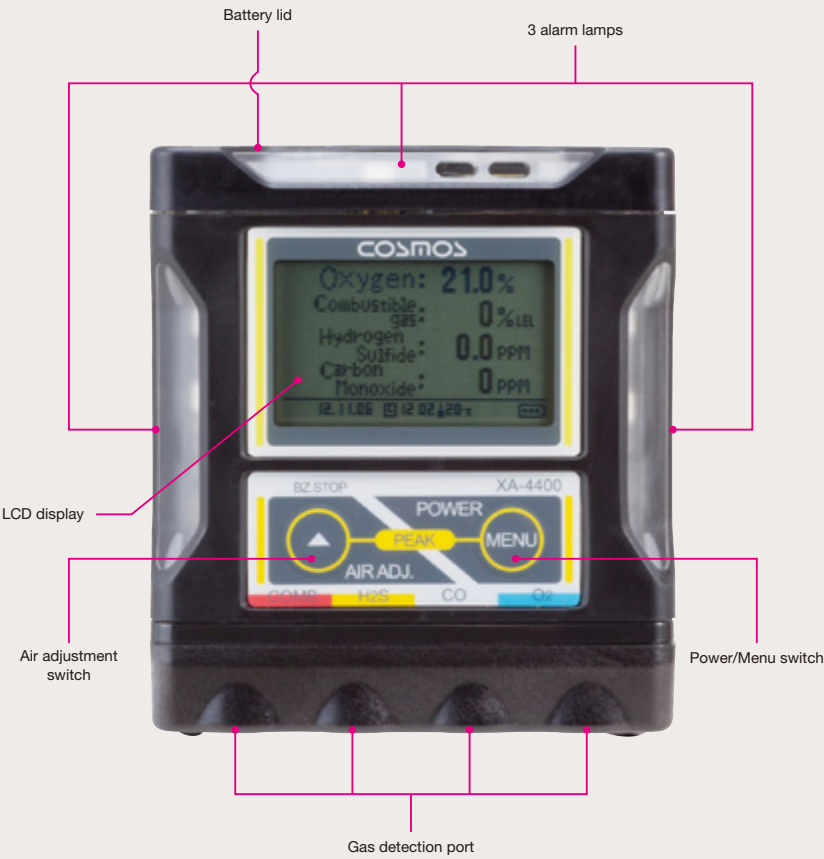
Choose one from A - C Choose one from 1 - 4

A	4 gases (Combustible, Oxygen, Hydrogen sulfide, Carbon monoxide)
B	3 gases (Combustible, Oxygen, Hydrogen sulfide)
C	3 gases (Combustible, Oxygen, Carbon monoxide)

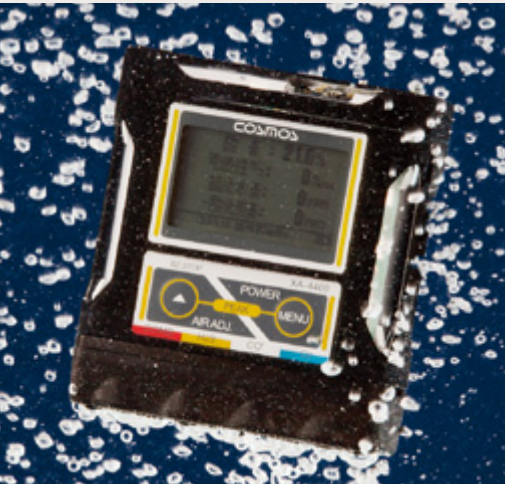
*Combustible : Methane or LPG

MULTI-GAS DETECTOR **XA-4400 SERIES**

Combustible gas/OxygenZ/Hydrogen Sulfide/Carbon Monoxide detector



● Waterproof/ dustproof (equivalent to IP67)



	Model	Comb gas	O2	H2S	CO
4-gas	XA-4400	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	XA-4300H	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3-gas	XA-4300C	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	XA-4200KS	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2-gas	XA-4200KH	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	XA-4200KC	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	XA-4300H-n	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	XA-4300C-n	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

SPECIFICATIONS

Model	XA-4400			
Gas Detected	Combustible gas (methane)	Oxygen	Hydrogen sulfide	Carbon monoxide
Detection Principle	Catalytic combustion	Galvanic cell	Electrochemical cell	Electrochemical cell
Sampling Method	Diffusion			
Detection Range (Service Range)	0-100%LEL (101-110%LEL)	0-25.0vol% (25.1-50.0vol%)	0-30.0ppm (30.1-150.0ppm) *1	0-300ppm (301-2,000ppm) *2
Alarm Set Value	1st stage: 10%LEL 2nd stage: 30%LEL	1st stage: 19.5vol% 2nd stage: 18.0vol%	1st stage: 10.0ppm 2nd stage: 15.0ppm TWA: 10.0ppm STEL: 15.0ppm	1st stage: 50ppm 2nd stage: 150ppm TWA: 25ppm STEL: 300ppm
Operating Temperature	-10 to 40 degrees C, 30 – 85%RH (non condensing)			
Power Source	2 × AA alkaline dry cells			
Display	LCD display			
Alarm Mode	Buzzer, flashing red lamps, flashing LCD display, vibration			
Battery Life *3	Approx. 15 hours.(at 25 degrees C, without alarm, backlight and data logging)			
Degree of Protection	Equivalent to IP67 *4			
Functions	•Automated backlight •Peak hold (lower limit for oxygen) •Alarm test •Change of alarm set value setting (unlocked) •Self-diagnosis function • Auto zero adjustment (Oxygen: 21vol%) • Display remaining battery life, temperature and time • Change alarm volume setting (unlocked) • Data logging (optional data logger is required) • TWA/STEL function			
Dimensions	79 (W) × 89 (H) × 33 (D) mm (excluding protrusions)			
Weight	Approx. 230g (including batteries)			
Standard Accessory	2 × AA alkaline dry cells, belt clip, replacement filter element			
Options	Soft case, arm belt, neck strap, simple inspection jig, data logger, pump unit kit, 1m gas sampling hose, 8m gas sampling hose			

*1 0.5ppm increments in from 35.0ppm to 150.0ppm. *2 5ppm increments in from 350ppm to 2000ppm. *3 It may differ by the condition of environment and use, storage period, battery manufacturer, etc. *4 Waterproof and dustproof structure meeting our inspection which conforms to the degree of protection IP67 in brand new condition.

STANDARD ACCESSORY



OPTIONS



Attach to soft case. To load stored data by infrared communication into computer.

PERSONAL CO/O2 DETECTOR **XOC-2200**

COSMOS Personal Gas Monitor XX-2200 Series Carbon monoxide/Oxygen detector



(Actual size)

FEATURES

- Can be used continuously for 5000 hours.
- Available with loud buzzer, alarm lamp from 4 dimensions, and peak hold function.
- Available with TWA (Time Weighted Average) gas concentration display, memory of peak value, and peak hold function.

SPECIFICATIONS

Model	XOC-2200	
Gas Detected	Oxygen (O ₂)	Carbon Monoxide (CO)
Detection Principle	Galvanic cell	Electrochemical cell
Sampling Method	Diffusion	
Measuring Range (Service Range)	0-25vol% (25-50vol%)	0-300ppm: 1ppm, (350-2,000ppm: 50ppm)
Resolution	0.1vol%	0-350ppm: 1ppm 350-2,000ppm: 50ppm
Indication Accuracy *1	Within±0.5vol%	Within±30ppm
Alarm Set Value	1st stage: 19.5vol% 2nd stage: 18.0vol%	1st stage: 50ppm, 2nd stage: 150ppm, 150ppm·h (time weighted average)
Response Time *2	20s or less	30s or less
Display Mode	LCD (Manual backlight)	
Alarm Mode	Buzzer sounds, flashing red light, vibrator	
Functions	Remaining battery level, peak hold, peak value memory, readout of time weighted average, remaining battery level, alarm functions except gas alarm (time weighted average, sensor malfunction, battery level, zero-adjustment malfunction), gas calibration, gas concentration indication	
Operating Temperature	-10°C to 40°C, 30-90% RH (non-condensing)	
Operating Air Pressure	Air pressure±10%	
Power source *3	1 × AAA alkaline dry cell	
Battery Life	Up to 5,000 hours (at 20°C with less than 20ppm of CO and more than 20.3vol% of O ₂)	
Dimensions	W65 × H64 × D22mm (excluding protrusions)	
Weight	approx. 75g (including battery)	
Standard Accessories	1 × AAA alkaline dry cell, 1 × safety pin adaptor (with fixing screw)	

*1 Under identical measuring conditions.
*2 Operating at 20±2°C.
*3 Battery life may vary with ambient conditions, conditions of use, storage period, battery manufactures, etc.

PERSONAL H2S/O2 DETECTOR **XOS-2200**

COSMOS Personal Gas Monitor XX-2200 Series Hydrogen Sulfide/Oxygen detector



(Actual size)

FEATURES

- Can be used continuously for 5000 hours.
- Available with loud buzzer, alarm lamp from 4 dimensions, peak hold function.
- Thin, lightweight design.

SPECIFICATIONS

Model	XOS-2200	
Gas Detected	Oxygen (O ₂)	Hydrogen Sulfide (H ₂ S)
Detection Principle	Galvanic cell	Electrochemical cell
Sampling Method	Diffusion	
Detection Range (Service Range)	0-25vol% (25-50vol%)	0-30.0ppm (30.1-100ppm)
Resolution	0.1vol%	0-35.0ppm: 0.1ppm 35-100ppm: 5ppm
Indication Accuracy *1	Within ±0.5vol% ±1 digit	Within ±1.5ppm ±1 digit
Alarm Set Value	1st stage: 19.5vol% 2nd stage: 18.0vol%	10.0ppm 15.0ppm
Response Time *2	20s or less	30s or less
Display Mode	LCD (Manual backlight)	
Alarm Mode	Buzzer sounds, flashing red light, vibrator	
Functions	Remaining battery level, peak hold, memory of peak value, alarm functions except gas alarm (sensor malfunction, remaining battery level, air-adjustment malfunction), gas concentration indication.	
Operations Temperature	-10°C to 40°C, 30-85% RH (non-condensing)	
Operation Air Pressure	Air pressure ±10%	
Power Source	1 × AAA alkaline dry cell (LR03)	
Battery Life *3	Up to 5000 hours (at 20°C without alarm)	
Dimensions	W65 × H64 × D22mm (excluding protrusions)	
Weight	Approx. 75g (including battery)	
Standard Accessories	1 × AAA alkaline dry cell, 1 × safety pin adaptor (with fixing screw)	

*1 Under identical measuring conditions. *2 Assuming 90% response and operating at 20 ±2°C.
*3 Battery life may vary with ambient conditions, conditions of use, storage period, battery manufactures, etc.

ODOR LEVEL INDICATOR **XP-329 III R**

Portable odor level indicator



FEATURES

- Instant digital display of odor intensity.

APPLICATIONS

- Performance check on deodorizing apparatus and air cleaners.
- Measuring smells of factory exhaust, waste water, and drainage.
- Quality control of foods and spices.

SPECIFICATIONS

Model	XP-329 III R
Substance Measured	Various odors, odor components
Detection Principle	Indium oxide-based sensitivity hot wire semiconductor sensor
Sampling Method	Extractive *Extractive flow: 400±150ml/min
Display	LCD digital indication (64 × 128 dots matrix) (measurement value, measurement mode, operating conditions, remaining battery level, data memory, bar indication for sensor output and communication channel etc.)
Measurement Mode	Monitoring mode·Batch mode
Detection Range	Level indication: 0-2000 (In case of zero-based setting at the 2nd dot from the left in the sensor output bar graph)
Repeatability	Measurement value±5%±1 digit *1 level indication
Response Time	20s or less (90% response) by calibrated odor
External Output	Analog output: Level indication: 0000-2000 corresponding to DC0-200 mV. (0.1mV as contrasted with indication 1) (Except approx. 204.8mV in case of OVER LEVEL) Digital input/output: RS-232C output the indicated value (ASCII Code) (Except in case of OVER LEVEL, output ["****"])
External Output Terminal	DIN connector for both analog output and digital input/output
Operating Temperature and Humidity	Temperature: 0 to 40°C Humidity: 10-80%RH (non-condensing)
Dimensions	W84 × H275 × D40mm (excluding protrusions)
Weight	Approx. 640g (including batteries)
Power Source	4 × AA alkaline dry cells or AC adaptor
Battery Life	Up to 8 hours by alkaline cells, low battery alarm function
Standard Accessories	Activated carbon filter, Drain filter, Sample draw attachment, Tube intake, AC adaptor, Carrying case, Output connector, Communication pack (CD), 4 × AA alkaline dry cells, Teflon tube (1m), 2 × Activated carbons, 2 × Filter elements (10 pcs.), Instruction manual, Test report

*1 Under identical measuring conditions.

OXYGEN INDICATOR **XP-3180E**

Digital oxygen indicator for combustion control



FEATURES

- Suitable for measuring concentration of oxygen in the flue gas of boilers etc.

SPECIFICATIONS

Model	XP-3180E
Gas Detected	Oxygen in the flue gas
Detection Principle	Galvanic cell
Sampling method	Extractive
Detection Range	0-25.0vol%
Indication Accuracy (Under identical conditions)	±0.3vol% (Compliant with JIS 8201)
Alarm Set Value	18.0vol%
Display	LCD digital (with back light) Digital display Digital bar display
Alarm Indication	Gas alarm; Intermittent buzzer, Red lamp flashing Trouble alarm; Buzzer, Red lamp flashing, LCD display
Explosion-Proof Structure	Exib II BT3
Operating Temperature	0 to 40°C
Power Source	4 × AA alkaline dry cells
Battery Life *1	Up to 100 hours
Dimensions	W82 × H162 × D36mm
Weight	Approx.450g
Standard Accessories	Soft case, 4 × AA alkaline dry cells, Gas sampling hose(1m), Probe with cooling drain filter
Optional Accessories	2-10m gas sampling hose, Curled probe, Data download software (CD-ROM software and USB cable)

*1 Battery life may vary with ambient conditions, conditions of use, storage period, battery manufactures, etc.

FORMALDEHYDE DETECTOR **XP-308B**

Portable and simplified Formaldehyde detector



FEATURES

- No need to replace reagents for each measurement.
- Select either mg/m3 or ppm as the displayed measurement mode for the measurement time.
- Select either the 30-min or 10-min measurement mode for the measurement time.
- Fully automatic operation simply by pushing operation buttons at the site of measurement.
- Random access to measurement data after measurement (up to 32 values).
- Reduced influence of VOCs through the use of DNPH filter.

APPLICATIONS

- Indoor air control.
- Housing material control.
- Checking remodeling byproducts.

SPECIFICATIONS

Model	XP-308B
Substance Detected	Formaldehyde
Detection Principle	Electrochemical cell (Influence of VOCs reduced by DNPH filter.)
Detection Range	0.01 to 0.38mg/m ³ (Service range: 0.39 to 3.00mg/m ³) 0.01 to 0.30ppm (Service range: 0.31 to 3.00ppm)
Sampling Method	Extractive
Measurement Time	30min/10min measurement mode (selectable)
Power Source	6× C dry cells or AC adaptor (9VDC)
Battery Life *1	30-min measurement mode : Up to 50 measurement operations by manganese dry cells(10-min measurement mode : Up to 100 measurement operations by manganese dry cells)
Filter Life *2	30-min measurement mode : 50 measurement operations (10-min measurement mode : 100 measurement operations)
Operating Temperature	5 to 40°C
Display	Digital numbers, Message, Bar graph
Dimensions	W175 × H140 × D86mm
Weight	Approx. 2.5kg
Standard Accessories	3 × DNPH Filters, 6× C manganese dry cells, Soft case, Sampling tube, Ten filter elements, Tweezers
Optional Accessories	AC adaptor, External output cable, Data reception software

*1 Battery life may vary with storage conditions, conditions of use, storage period, battery manufacturers, etc.

*2 These values are for an average formaldehyde concentration per measurement of 0.10mg/m³. The battery life will be shortened at higher concentrations.

CONSIDERATIONS FOR USE

- Measured value can be influenced if aldehyde group other than formaldehyde, like acetaldehyde, coexists.
- Cigarette smoke or alcohol like liquor will cause measurement errors.
- Sudden change in environment, such as temperature and humidity, will cause measurement errors.

OTHERS

HCFC/HFC LEAK DETECTOR **XP-704**

HCFC/HFC detector



FEATURES

- Newly developed low-power hot wire semiconductor sensor for HCFCs and HFCs realized super-sensitive detection.
- Compact, lightweight, and easy to use! Furthermore, it's Extractive type.
- Detection indicated in two ways - lamp and buzzer.
- Far more sensitive than leak detection liquid (soapy water etc.), and easier to use.

SPECIFICATIONS

Model	XP-704
Detection Principle	Hot wire semiconductor
Gas Detected	R-22, R-123, R-23, R-32, R-134a, R-142b, R-404A, R-407A, R-407C, R-407E, R-410A, R-507A, R-290, R-600a, R-707 * Please specify gas to be detected.
Sampling Method	Extractive
Minimum Detectable Concentration	5ppm
Minimum Detectable Leak Rate	2.1x10 ⁻⁴ Pa · m/s 2.8g/year leak
Response Time	10s or less
Detection Indication	Intermittent buzzer and flashing lamp
Power Source	4 × AA (R6) dry cells
Battery Life *1	Up to 3 hours (by manganese dry cells) Up to 9 hours (by alkaline dry cells)
Low Battery	BATT. Lamp goes off
Operating Temperature	0 to 40°C
Dimensions	W68 × H155 × D32mm
Weight	Approx. 400g
Standard Accessories	Probe with filter/moisture trap, Check gas, Filter element, Soft case, 4 × AA (R6) manganese dry cells, Spare filters
Optional Accessories	Earphone

*1 Battery life may vary with ambient conditions, conditions of use, storage period, battery manufacturers, etc.

GREASE STEEL DUST METER **SDM-72**

Portable Grease Steel Dust meter



FEATURES

- Enables diagnosis of the wear condition of bearings before an increase in vibration.
- Simple operation - simply place the grease sample.

APPLICATIONS

- Simple diagnosis and trend monitoring of the wear condition of greased bearings, gears, etc.
- Pre-diagnosis for Ferrography method and SOAP method.

SPECIFICATIONS

Model	SDM-72
Measurement Principle	Magnetic balance type electromagnetic method
Substance Measured	Steel dust concentration in grease
Measurement Range	0 - 5.000%wt
Resolution	0.001%wt
Zero Adjustment	Automatic adjustment
Amount of Sample	Approx. 0.8ml
Power Source	4 × AA (R6) alkaline dry cells
Battery Life *1	Up to 30 hours by alkaline cells
Operating Temperature	0 to 40°C
Dimensions	W84 × H190 × D40mm
Weight	Approx. 500g (including batteries)
Standard Accessories	Carrying case, Grease sampling spatula, Grease sample case (10 pieces), 4 × AA (R6) alkaline dry cells

*1 Battery life may vary with ambient conditions, conditions of use, storage period, battery manufacturers, etc.

OIL STEEL DUST CHECKER **SDM-73**

Portable Oil Steel Dust checker



FEATURES

- Enables simple diagnosis and trend monitoring of the wear condition of bearings, gears, cylinders, etc. by checking steel dust concentration in lubricating oil.
- Simple operation - simply place the oil sample.

FEATURES

- Simple diagnosis of the wear condition of bearings, gears, cylinders, etc. in rotational equipment.
- Monitoring steel dust contamination in hydraulic oil and grinding oil.

SPECIFICATIONS

Model	SDM-73
Measurement Principle	Magnetic balance type electromagnetic induction method
Substance Measured	Steel dust concentration in lubricating oil
Measurement Range	0-19999wt ppm
Resolution	1wt ppm
Zero Adjustment	Automatic adjustment
Amount of Sample	1.5ml
Power Source	4 × AA (R6) alkaline dry cells
Battery Life *1	Up to 30 hours by alkaline cells
Operating Temperature	0 to 40°C
Dimensions	W84 × H190 × D40mm
Weight	Approx. 500g (including batteries)
Standard Accessories	Carrying case, 2ml syringe (5 pieces), Oil sampling nozzle (2 pieces), Syringe holder, 4 × AA (R6) alkaline dry cells

*1 Battery life may vary with ambient conditions, conditions of use, storage period, battery manufacturers, etc.