

# Incorporates new R sensor for improved functionality and durability

—World-leading continuous operating time and **extensive** sensor lineup—



## Portable Gas Monitor Model 04 Series

### Model OX-04

Detection target gas:  
Oxygen (Electrochemical type)



### Model OX-04G

Detection target gas:  
Oxygen (Galvanic cell type)



### Model HS-04

Detection target gas:  
Hydrogen sulfide



### Model CO-04

Detection target gas:  
Carbon monoxide



### Model CO-04 (C-)

Detection target gas:  
Carbon monoxide  
(Hydrogen interference reduction)



### Model CX-04

Detection target gas:  
Carbon monoxide & oxygen

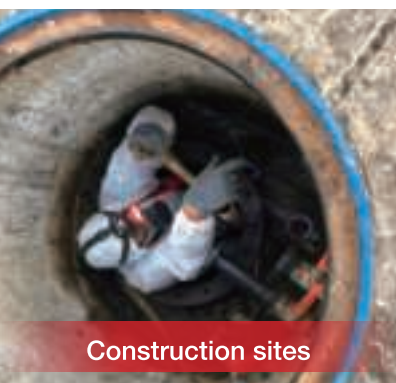


### Model SC-04

Detection target gas:  
Toxic gases  
(SO<sub>2</sub>/NO<sub>2</sub>/HCN/PH<sub>3</sub>/NH<sub>3</sub>/Cl<sub>2</sub>)

**The 04 Series is a range of wearable compact portable gas monitors.**

**The extensive lineup of sensors and rugged design make them ideal for on-site use in any industry.**



Construction sites



Gas plants



Steel plants



Chemical plants

Compact lightweight design does not impede work even in confined spaces.

Tough design to withstand 7 m drop testing provides peace of mind, even when working at heights.

The newly developed CO sensor reduces effects of hydrogen interference!

The extensive lineup of toxic gas sensors supports a broad range of applications.

## Incorporates the new R sensor for improved functionality and durability

### 1 A major sensor upgrade

Outstanding durability and performance accompanied by a three-year sensor warranty (one-year sensor warranty for OX-04G, SC-04 (NH<sub>3</sub>), and SC-04 (Cl<sub>2</sub>))

### 2 Wide range of operating temperatures

Can be used at temperatures between -40 °C and +60 °C (depending on sensor specifications)

### 3 Reduced hydrogen interference: CO-04 (C-)

Newly developed carbon monoxide sensor is virtually unaffected by hydrogen interference. Compatible with environments (e.g., settings in the steel industry) where hydrogen is present

### 4 Dual sensor: CX-04

Compact, portable monitor based on a newly developed dual carbon monoxide and oxygen sensor simultaneously detects and displays measurements of two components!

### 5 Lineup of 12 different sensors

Lineup includes extensive range of toxic gas sensors (SO<sub>2</sub>, NO<sub>2</sub>, HCN, PH<sub>3</sub>, NH<sub>3</sub>, Cl<sub>2</sub>) in addition to standard oxygen, carbon monoxide, and hydrogen sulfide sensors.

OX-04/CO-04/HS-04	CO-04 (C-)	CX-04	SC-04
Greatly improved basic characteristics!	Reduced H <sub>2</sub> interference!	2-in-1 dual construction	Extensive toxic gas lineup

## Feature-packed

### 1 9,000 hours continuous operating time

Among the longest continuous operating times for any compact portable gas monitor at approx. 9,000 hours(\*) \* OX-04G/CO-04/HS-04

### 2 Available with choice of rechargeable or dry cell battery power supply.

The lineup includes the choice of two different power supplies: dry cell batteries for immediate use or rechargeable batteries for repeated use. (Specify at time of purchase.)

## Worry-free design

### 1 Passes 7 m drop resistance tests

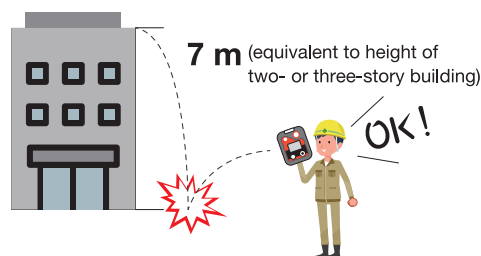
Reduced risk of failure if accidentally dropped, for peace of mind when working at heights

### 2 Dustproof, waterproof construction

Dustproof and waterproof construction with protection rating equivalent to IP66/67, for peace of mind when working outdoors

### 3 Intrinsically safe explosion-proof construction

Intrinsically safe explosion-proof construction (Japan EX/ATEX/IECEX/INMETRO), allowing use even in hazardous locations



## Common specifications

Sampling method	Diffusion type
Alarm	Gas alarms: Three-step alarm, STEL alarm, TWA alarm, OVER alarm Fault alarms: Sensor connection/disconnection, low battery level, calibration fault, clock abnormality, system abnormality
Alarm reset operation	Auto-reset or self-latching (*1)
Alarm pattern	Flashing LED, intermittent buzzer sounding, gas concentration readout blinking, vibration
Buzzer volume	80 dB or greater (at 30 cm)
Power supply (*2)	AAA alkaline or Ni-MH (eneloop) batteries (×2)
Explosion-proof construction	Intrinsically safe explosion-proof construction <Dry cell battery model> Japan Ex: Ex ia IIC T4 Ga ATEX: II1G Ex ia IIC T4 Ga IECEX: Ex ia IIC T4 Ga INMETRO: Ex ia IIC T4 Ga <Rechargeable battery model> Japan Ex: Ex ia IIC T3 Ga ATEX: II1G Ex ia IIC T3 Ga IECEX: Ex ia IIC T3 Ga INMETRO: Ex ia IIC T3 Ga
Certifications	Japan Ex, ATEX, IECEX, INMETRO
CE marking	ATEX Directive, EMC Directive, RoHS Directive
Protection level	IP66/67 equivalent
External dimensions/weight	Approx. 54 mm (W) × 67 mm (H) × 24 mm (D) (excluding protrusions) / Approx. 93 g
Functions	Data logger, vibration, STEL alarm, TWA alarm, quick calibration, peak value display, temperature display

## Individual model specifications

Model	OX-04G	OX-04	CO-04	CO-04 (C-)	CX-04	
Detection target gas	Oxygen	Oxygen	Carbon monoxide	Carbon monoxide (Hydrogen interference reduction)	Carbon monoxide	Oxygen
Detection principle	Galvanic cell type		Electrochemical type			
Display range	0.0-40.0 %	0.0-40.0 %	0-2,000 ppm	0-2,000 ppm	0-2,000 ppm	0.0-40.0 %
Detection range	0.0-25.0 %	0.0-25.0 %	0-500 ppm	0-500 ppm	0-500 ppm	0.0-25.0 %
Resolution	0.1 %	0.1 %	1 ppm (0-300 ppm) 10 ppm (300-2,000 ppm)	1 ppm (0-300 ppm) 10 ppm (300-2,000 ppm)	1 ppm (0-300 ppm) 10 ppm (300-2,000 ppm)	0.1 %
Alarm setpoints	L 18.0 % LL 18.0 % H 25.0 % OVER 40.0 %	L 18.0 % LL 18.0 % H 25.0 % OVER 40.0 %	1st 25 ppm 2nd 50 ppm 3rd 1,200 ppm TWA 25 ppm STEL 200 ppm OVER 2,000 ppm	1st 25 ppm 2nd 50 ppm 3rd 1,200 ppm TWA 25 ppm STEL 200 ppm OVER 2,000 ppm	1st 25 ppm 2nd 50 ppm 3rd 1,200 ppm TWA 25 ppm STEL 200 ppm OVER 2,000 ppm	L 18.0 % LL 18.0 % H 25.0 % OVER 40.0 %
Response time T90 (*3)	Within 20 seconds (Typical: 9 seconds)	Within 20 seconds (Typical: 8 seconds)	Within 30 seconds (Typical: 6 seconds)	Within 30 seconds (Typical: 17 seconds)	Within 30 seconds (Typical: 7 seconds)	Within 30 seconds (Typical: 15 seconds)
Operating temperature range	-20 °C - +50 °C (no sudden fluctuations) -40 °C - +60 °C (no sudden fluctuations)*4					
Operating humidity range	10 - 90 %RH (no condensation) 0 - 95 %RH (no condensation)*5					
Continuous operating time (dry cell batteries) (Ni-MH batteries)	Approx. 9,000 hours Approx. 6,000 hours	Approx. 3,000 hours Approx. 2,000 hours	Approx. 9,000 hours Approx. 6,000 hours	Approx. 6,200 hours Approx. 4,200 hours	Approx. 4,600 hours Approx. 3,000 hours	

Model	HS-04	SC-04 (SO <sub>2</sub> )	SC-04 (NO <sub>2</sub> )	SC-04 (HCN)	SC-04 (PH <sub>3</sub> )	SC-04 (NH <sub>3</sub> )	SC-04 (Cl <sub>2</sub> )
Detection target gas	Hydrogen sulfide	Sulfur dioxide	Nitrogen dioxide	Hydrogen cyanide	Phosphine	Ammonia	Chlorine
Detection principle	Electrochemical type						
Display range	0.0-200.0 ppm	0.00-100.00 ppm	0.00-20.00 ppm	0.0-30.0 ppm	0.00-20.00 ppm	0.0-400.0 ppm	0.00-20.00 ppm
Detection range	0.0-100.0 ppm	0.00-20.00 ppm	0.00-20.00 ppm	0.0-30.0 ppm	0.00-20.00 ppm	0.0-300.0 ppm	0.00-10.00 ppm
Resolution	0.1 ppm (0.0-30.0 ppm) 1.0 ppm (30.0-200.0 ppm)	0.05 ppm	0.05 ppm	0.1 ppm	0.01 ppm	0.5 ppm	0.05 ppm
Alarm setpoints	1st 5 ppm 2nd 30.0 ppm 3rd 100.0 ppm TWA 1.0 ppm STEL 5.0 ppm OVER 200.0 ppm	1st 2.00 ppm 2nd 5.00 ppm 3rd 100.00 ppm TWA 2.00 ppm STEL 5.00 ppm OVER 100.00 ppm	1st 2.00 ppm 2nd 4.00 ppm 3rd 20.00 ppm TWA 0.50 ppm STEL 1.00 ppm OVER 20.00 ppm	1st 10.0 ppm 2nd 20.0 ppm 3rd 30.0 ppm TWA 0.9 ppm STEL 4.5 ppm OVER 30.0 ppm	1st 0.30 ppm 2nd 0.60 ppm 3rd 1.00 ppm TWA 0.30 ppm STEL 1.00 ppm OVER 20.00 ppm	1st 25.0 ppm 2nd 50.0 ppm 3rd 300.0 ppm TWA 25.0 ppm STEL 35.0 ppm OVER 400.0 ppm	1st 1.00 ppm 2nd 2.00 ppm 3rd 10.00 ppm TWA 0.50 ppm STEL 1.00 ppm OVER 20.00 ppm
Response time T90 (*3)	Within 30 seconds (Typical: 18 seconds)	Within 30 seconds (Typical: 9 seconds)	Within 30 seconds (Typical: 6 seconds)	Within 90 seconds (Typical: 36 seconds)	Within 30 seconds (Typical: 6 seconds)	Within 90 seconds (Typical: 30 seconds)	Within 90 seconds (Typical: 36 seconds)
Operating temperature range	-40 °C - +60 °C (no sudden fluctuations)*4			-20 °C - +60 °C (no sudden fluctuations)*4	-40 °C - +60 °C (no sudden fluctuations)*4	-30 °C - +50 °C (no sudden fluctuations)*4	-40 °C - +60 °C (no sudden fluctuations)*4
Operating humidity range	0 - 95 %RH (no condensation)*5						
Continuous operating time (dry cell batteries) (Ni-MH batteries)	Approx. 9,000 hours Approx. 6,000 hours	Approx. 3,000 hours Approx. 2,000 hours					

\*1: CO-04, CO-04 (C-), CX-04: auto reset, OX-04G, OX-04, HS-04, SC-04: self-latching

\*2: To ensure explosion-proof performance, use only the batteries indicated on the explosion-proof certificate.

\*3: Typical indicates an average value.

\*4: In temporary ambient conditions for approximately 15 minutes. The operating temperature range for continuous ambient conditions is as follows: Temperature: -20 °C - +50 °C (no sudden fluctuations)

\*5: In temporary ambient conditions for approximately 15 minutes. The operating humidity range for continuous ambient conditions is as follows: Humidity: 10 - 90 %RH (no condensation)

## Accessories



Protection cover (x1)  
Part No.: 4123 6450 20



Alligator clip  
Part No.: 4711 7111 10

Attached to breast pocket



Example showing  
mounting on band  
attached to helmet

AAA alkaline batteries (x2) Part No.: 2757 0001 90

eneloop (x2) Part No.: 2757 0043 00

Specify dry cell battery or rechargeable battery when ordering.

\* To ensure explosion-proof performance, use only the batteries indicated on the explosion-proof certificate.

## Optional accessories



Belt clip (x1)  
Part No.: 4123 6463 30

Attached to belt



Calibration adapter  
Part No.: 4123 9694 70



Heat-resistant case<sup>\*1</sup>  
Part No.: 4732 5029 70



Arm band  
Part No.: 4123 9703 10



Hand strap  
Part No.: 0888 0605 90



Data logger management program  
Part No.: 9811 0940 20



Helmet mounting clip<sup>\*2</sup>  
Part No.: 4732 4978 10

Humidity control filter CF-A13i-1

For HS-04, SC-04 (PH<sub>3</sub>) (pack of five)

Part No.: 4777 4400 10

H<sub>2</sub>S removal filter CF-A13D-3

For SC-04 (HCN) (pack of five)

Part No.: 4777 9373 90

H<sub>2</sub>S removal filter CF-A13D-1

For SC-04 (SO<sub>2</sub>, NO<sub>2</sub>) (pack of five)

Part No.: 4777 9347 10

Interference gas removal filter CF-6280

For CO-04/CO-04 (C-)/CX-04 (pack of five)

Part No.: 4777 9351 60

Dust filter (built-in)<sup>\*3</sup>

Part No.: 4123 6394 40

Spacer<sup>\*4</sup>

Part No.: 4732 5027 20

\*1: Explosion-proof requirements not met when fitted \*2: Separate female mounting fixture also required \*3: Not used with SC-04 (Cl<sub>2</sub>) \*4: Used only with SC-04 (Cl<sub>2</sub>)

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\* The contents described in this catalog are subject to change without notice according to the performance improvement.

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