

Gas Leak Detector

With in-built Display and Alarm

Model: KD-12 Series

- **Simpler, smarter and reliable gas detector with digital display**
- **Simple and cost effective installation**
- **Rugged, compact and lightweight design**
- **Environmentally friendly Product**



Scale
1:1

Approvals:

- Ex d IC T5 (KD-12 A/B/C)
- Ex d IB T6 (KD-12 B/O)
- CE Marking (EMC Directive)
- ATEX standard
- China Fire Equipment Inspection*
- *(Pending)
- Others

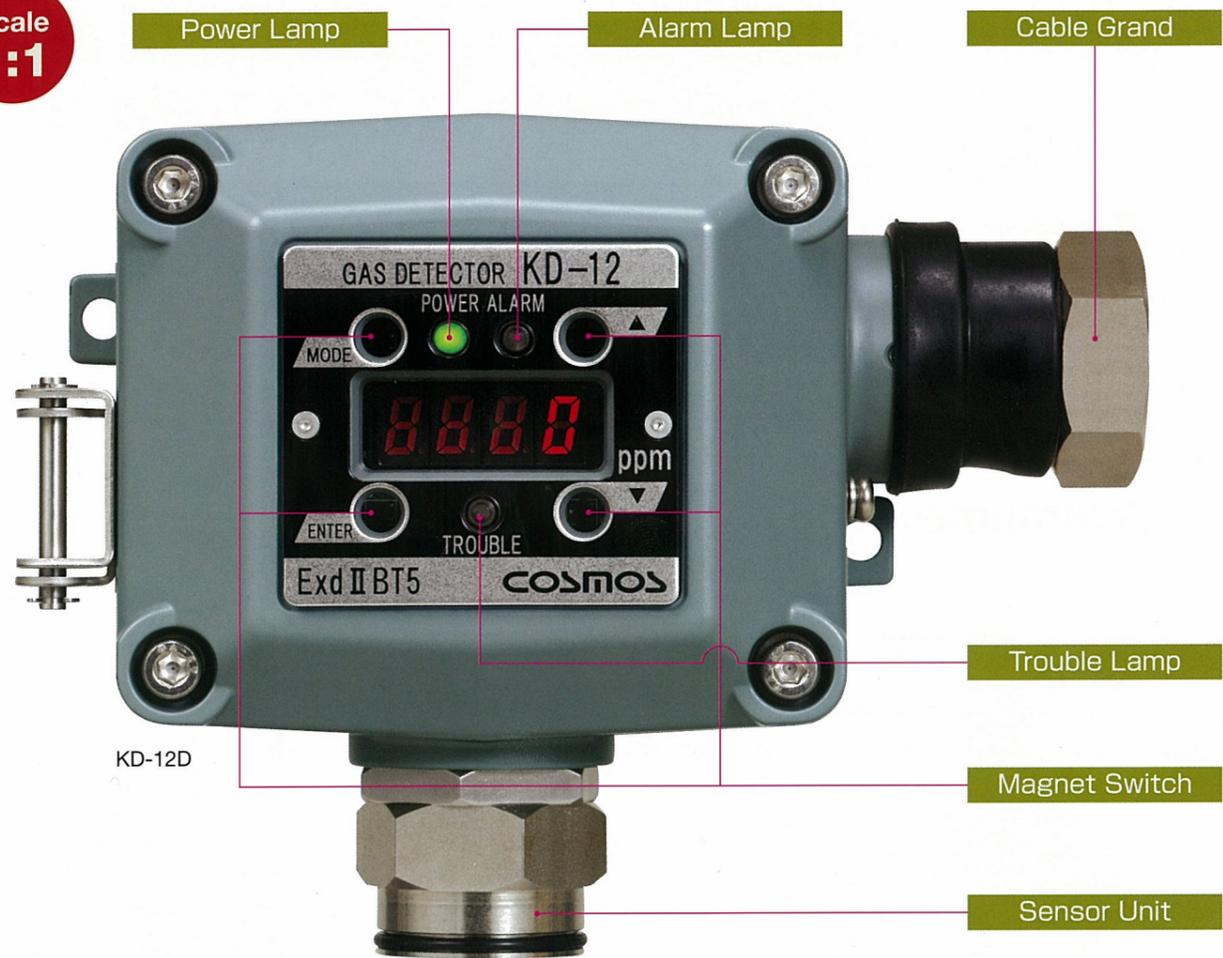
Combustible Gas 

Hot wire semiconductor sensor 

Catalytic combustion sensor 

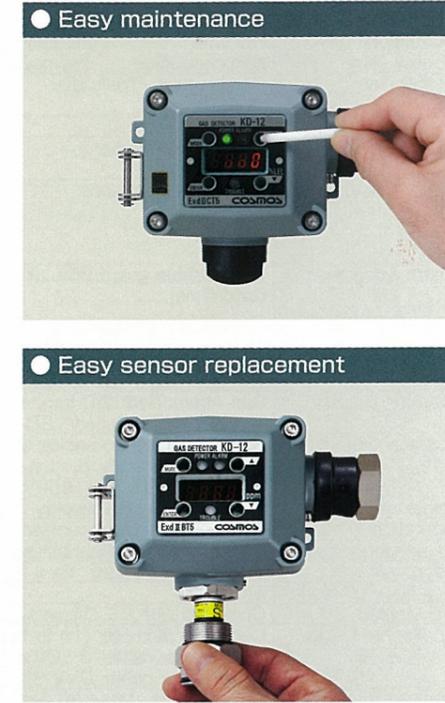
Very Compact and Light with Digital Display

Scale 1:1



Features

- **LED Display**
Large and Easy-to-see display shows the gas concentration and alarm indication.
- **Easy maintenance**
With a magnetic stick, Zero and Span adjustments can be done without any difficulty on site.
- **Easy sensor replacement**
The simple plug-in sensor module makes it easier.
- **Rugged, Compact and Lightweight**
Protection rating IP65 (standard)
Size W158×H116×D68mm, weight 1.2kg
- **Explosion-proof**
KD-12A/B/C are designed as ExdII CT5 for Hydrogen and Acetylene.
- **Environmentally-friendly design**
Lead-free PC board, electronics parts and solders
RoHS regulation can be applied to KD-12A/B/C on your request.
- **For Combustible, Toxic gases and Oxygen deficiency**
Detects many gases from ppm to vol% with
 - Hot Wire Semiconductor Sensor
 - Catalytic Combustion Sensor
 - Thermal Conductivity Sensor
 - Electrochemical Sensor
 - Galvanic Cell Sensor (oxygen)



Cost effective

User friendly, one person calibration



Different Configurations of KD-12

With Buzzer or Rotating beacon light

It is used as an integral type gas detection system, connecting to External Buzzer or Rotating beacon light (screw-less type only).

With External buzzer
Rotating beacon light

Desktop type

With Indicator unit

It is connected with our indicators. Alarms and gas concentration indications can be displayed and checked from not only Indicator unit but also form Detector head.

One point type

Multi channel type

VM2 Type
or
V-810

With DCS/PLC/SCADA

It is directly connected to a Central control system such as DCS/PLC/SCADA. It is also mounted in a vehicle like Tank lorry etc.

With DCS/PLC etc.

For Tank lorry

※ Non Explosion-proof

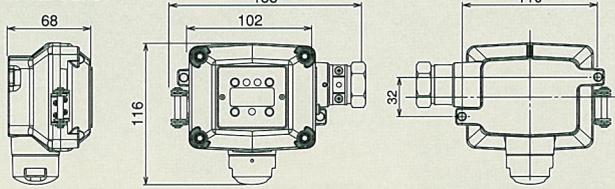
Specifications

Mode	KD-12A	KD-12B	KD-12C	KD-12D	KD-120	
Corresponding Sensor Type	Hot wire semiconductor	Catalytic combustion	Thermal Conductivity	Electrochemical cell	Galvanic cell	
Target Gas	Combustible /Toxic gas		Hydrogen, Helium, Carbon dioxide	Carbon monoxide	Hydrogen sulfide	Oxygen
Sampling Method	Diffusion type					
Detection Range	As per specifications		0-100ppm, 0-150ppm or 0-250ppm*1	0-30ppm or 0-50ppm*1	0-25.0vol%	
Alarm Set Value	As per specifications		FS100ppm: 25ppm(recommendation) FS150/250ppm: 50ppm(recommendation)	10ppm	18.0vol%	
Alarm Accuracy	Combustible gas: ±25% of Alarm Set Value (under identical conditions).		±30% of Alarm Set Value (under identical conditions)		±1.0vol% of Alarm Set Value (under identical conditions)*2	
Alarm Delay	Combustible gas: 30s or less at 160% concentration of an Alarm Set Value. Toxic gas: 60s or less at 160% concentration of an Alarm Set Value.		60s or less at 160% concentration of an Alarm Set Value.		5s or less to reach 18vol% under condition of 10vol%*2	
Warning Display	Gas Alarm: Red LED lamp flashes Trouble Alarm: Yellow LED lamp flashes (sensor trouble, power voltage malfunction, etc.)					
External Output	Gas concentration analog signal: 4 to 20mA DC (common to the negative side of power supply) Gas alarm contact *3 : 1 a non-voltage relay contact / Non-latching Rated load: 0.5 A at 250V AC or 0.5 A at 30V DC (resistance load)					
Gas Concentration Display	4-digit digital LED display					
Operation	At 4 points of magnetic switches					
Cable Connection	Screw-less / terminal block					
Approvals	Ex d IIC T5 (Japan), Ex II 2G Ex d IIC T5 (ATEX)			Ex d II BT5		
Degree of protection	IP65					
CE Marked	Complied with CE Directive 2004/108/EC					
Applicable Cable	Cable out diameter (10 to 13 mm dia.) 5-conductor cable *3 : CVV-S 1.25mm ² 3-conductor cable: CVV-S 2mm ² or 1.25mm ²					
Temperature and Humidity range *4	Temperature: -10 to 50 degrees C Humidity: 10 to 90%RH (0 to 50 degrees C)		Temperature: -10 to 40 degrees C Humidity: 30 to 85%RH		Temperature: 0 to 40 degrees C Humidity: 30 to 85%RH	
Power Supply	24V DC (18 to 30V DC)					
Power Consumption	3W or less		1.2W or less			
Dimensions	158(W) x 116(H) x 68(D) mm (excluding protrusions)		158(W) x 120(H) x 68(D) mm (excluding protrusions)			
Weight	Approx. 1.2kg		Approx. 1.3kg			

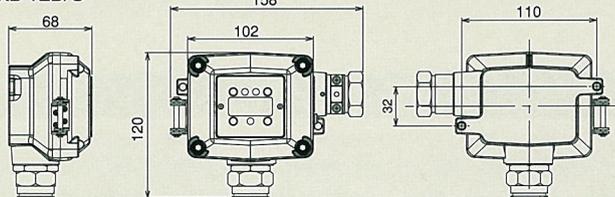
*1: Please specify when purchasing *2: Under the condition of 20±2 degrees C *3: Screwless type only *4: No radical temperature or humidity changes and no condensation.

External Dimensions

●KD-12A/B/C

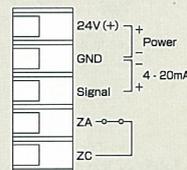


●KD-12D/O

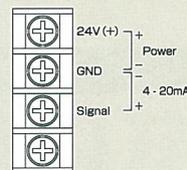


Terminal Block

Screw-less Type



Terminal Block Type



Optional Item

Protective Cover Horizontal Type(KW-41)



Protective Cover Vertical Type(KW-42)



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.

We received ISO 9001 certification for our design, manufacturing, sales, and service operations at our head office, branches and factories.



Registered No. : JQ 064C

We obtained the ISO 14001 International Environmental Management System certification at head office.



NEW COSMOS ELECTRIC CO., LTD.

Head Office :

2-5-4, Mitsuya-naka, Yodogawa-ku, Osaka 532-0036, JAPAN
TEL. 81-6-6309-1505 FAX. 81-6-6308-0371

Tokyo Office :

3rd floor, Towa-Hamamatsucho Bldg.,
2-6-2 Hamamatsu-cho, minato-ku, Tokyo 105-0013, JAPAN
TEL. 81-3-5403-2715 FAX. 81-3-5403-2710

URL : <http://www.new-cosmos.co.jp/en/index.html>



* The information contained in this catalog is subject to change.

2010073k-01 Printed in Japan