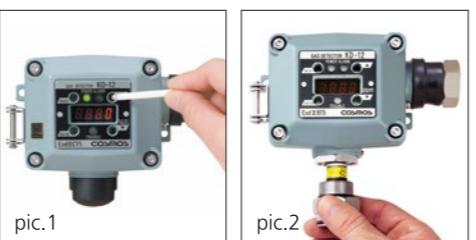
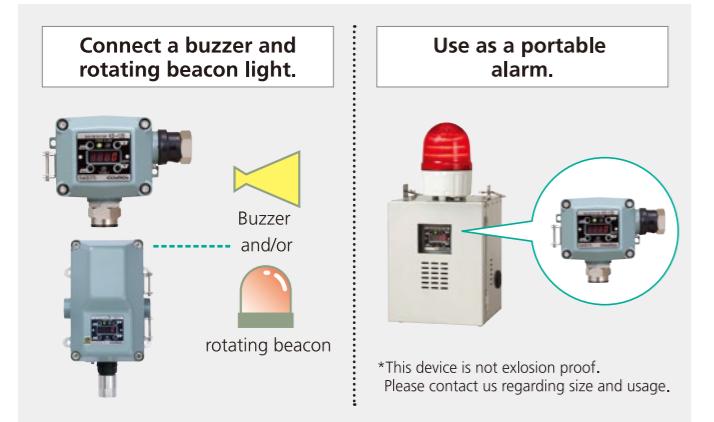


Features

- **Local LED display**
Large local LED display shows gas concentrations and alarm indication.
- **One man calibration**
All setup and maintenance can be performed easily on site by one person with a magnetic stick (pic.1).
- **Made in Japan**
Including the sensor, all products are developed and manufactured in Japan to ensure the highest quality and reliability.
- **Water and dust proof**
IP65 rating
- **Easy sensor replacement**
Simple plug-in sensor module makes sensor replacement easy (pic2).

**Flexible design for every application.****1. Stand alone detector or integrated alarm system.**

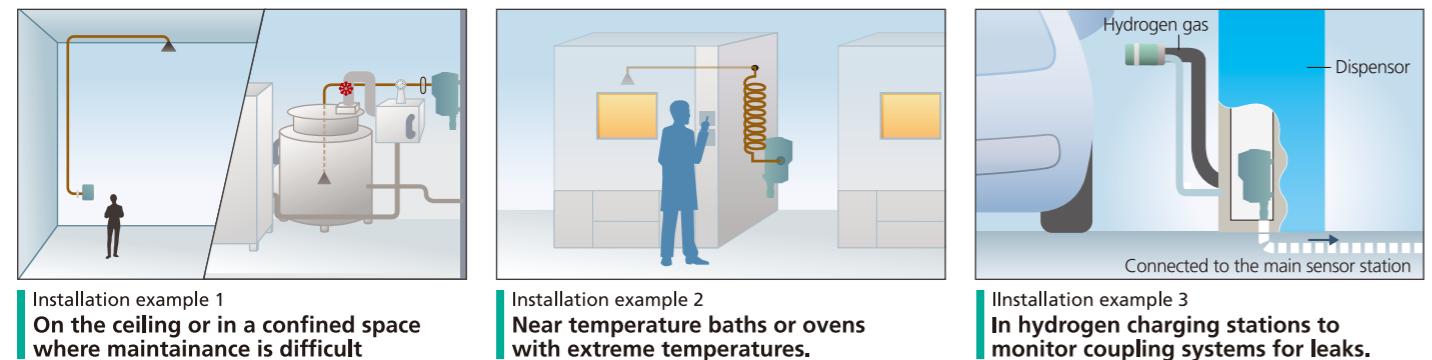
Attach a buzzer and rotating beacon light, and it can be used as a stand alone alarm system. (The KD-12 series is screwless type only)

**2. Connect to our alarm systems for integrated detection.**

Ensure maximum safety by connecting with our indicator panels for easy gas alarm and concentration checking in multiple locations.

**Attach a pump to further increase possible uses.**

Perfect for use in areas where it is difficult to perform maintenance on diffusion type detectors.

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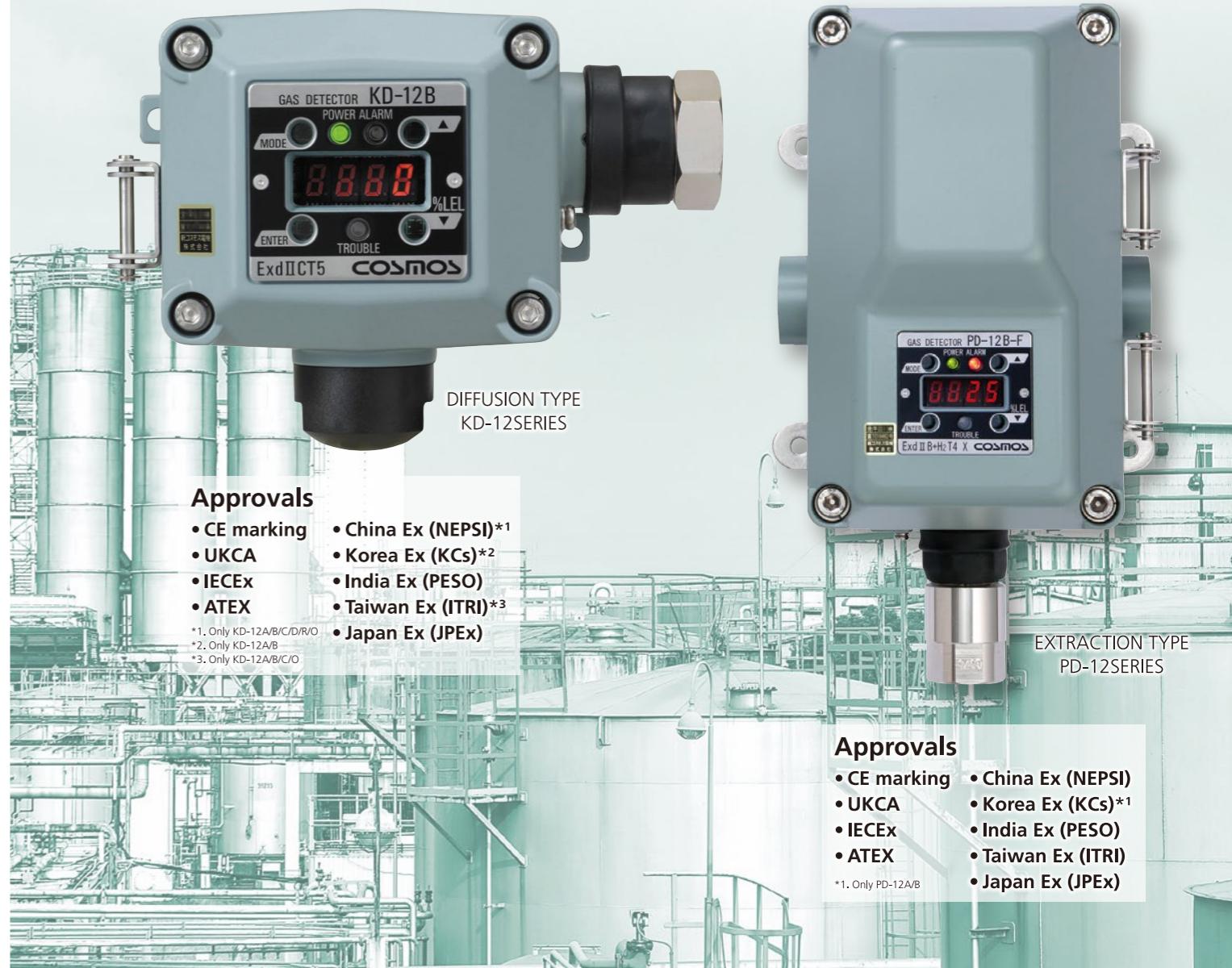
TAIWAN NEW COSMOS ELECTRIC CO., LTD.
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Phone: +886-3-574-4593
E-mail: cosmost1@ms75.hinet.net

**SAFETY WARNING**

Carefully read the instruction manual prior to use.
Select and use the device designed to detect the required type of gas. Use of a wrong sensor type may cause an accident.

Be sure, be safe.**COSMOS****GAS DETECTOR HEAD with DISPLAY
KD-12 SERIES / PD-12 SERIES****Concentration levels you can see,
security you can feel.**

~Introducing our compact detector with display functionality~

**Certified Safety
Integrity Level (SIL2)***Only KD-12B

KD-12 SERIES

* Cable gland is not included in ATEX certified models and sold separately.

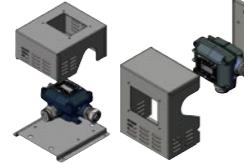
Standard and Optional Accessories**Standard Accessories**

Magnetic Wand (MJ-1)

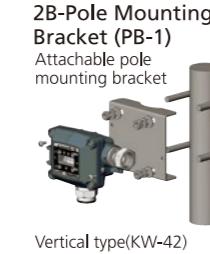
Optional Accessories

Protective Cover

Impact and weathering protection



Horizontal type (KW-41)



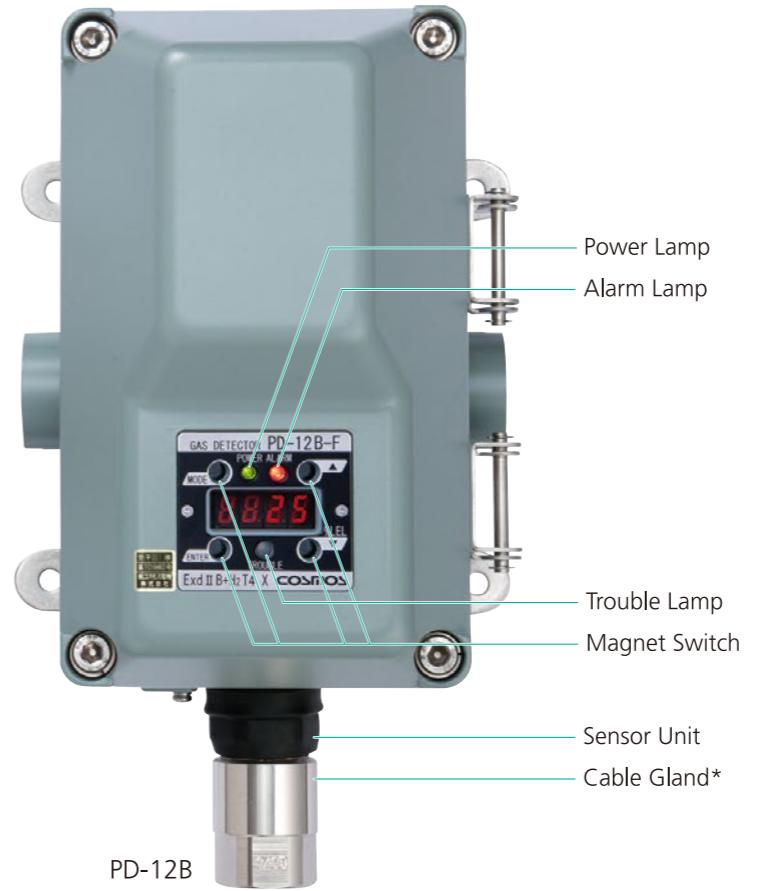
Vertical type (KW-42)

Specifications

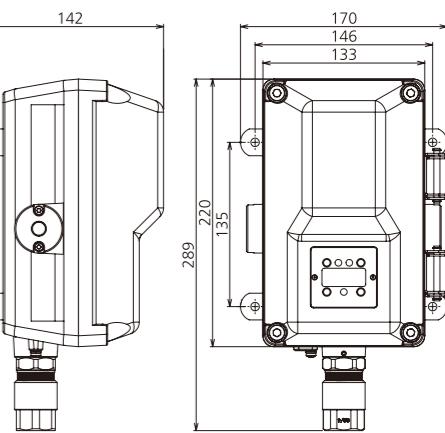
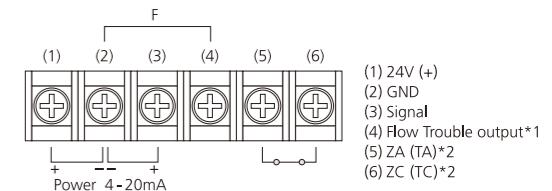
Model	KD-12A	KD-12B	KD-12C	KD-12R	KD-12D	KD-12O
Detection Principle	Hot-wire Semiconductor	Catalytic Combustion	Thermal Conduction	Non-dispersive Infrared	Electrochemical Cell	Galvanic Cell
Target Gas	Combustible gas, Toxic gas			Hydrogen, Helium, Carbon dioxide	Methane, Carbon dioxide	Hydrogen sulfide
Sampling Method	Diffusion					
Detection Range	Specification Dependant			0-100ppm, 0-150ppm, or 0-250ppm* ¹	0-30-ppm or 0-50ppm* ¹	0-25.0vol%
Alarm Set Value	Specification Dependant			FS100ppm: 25ppm (recommendation) FS150/250ppm: 50ppm (recommendation)	10ppm	18.0vol%
Alarm Accuracy	Combustible gas: ±25% of alarm set value Toxic gas: ±30% of alarm set value			±25% of alarm set value	±30% of alarm set value	±1.0vol% of alarm set value
Alarm Response Time	Combustible gas: within 30s at 1.6 times alarm set value Toxic gas: within 60s at 1.6 times alarm set value			Within 30s at 1.6 times of alarm set value	Within 60s at 1.6 times of alarm set value	Within 5s to reach 18vol% under condition of 10vol%* ²
Alarm Indication	Gas alarm: Red LED lamp flashes Trouble alarm: Yellow LED lamp flashes (Sensor trouble, Power voltage malfunction, etc.)					
Gas Concentration Display	4-digit digital LED display					
Output	Gas concentration analog signal •DC4-20mA (common to the negative side of power supply) Gas alarm contact (one stage only)* ³ •1a no-voltage contact output, Non-latching •Rated load: 0.5A at 250VAC or 0.5A at 30VDC (resistance load)					
Operation	4 Magnetic Switches					
Explosion Proofing	II 2 G Ex db IIC T5 Gb (ATEX) Ex db IIC T5 Gb (IECEx) Ex d IIC T5 (Japan Ex)	II 2 G Ex db IIC T5 Gb (ATEX) Ex db IIC T5 Gb (IECEx) Ex d IIB T5 (Japan Ex)				
Protection Level	IP65					
Applicable Cable	Outer Diameter: ø10-13 mm 5-conductor cable*: CVV-S 1.25mm ² , 3-conductor cable: CVV-S 2mm ² or 1.25mm ²					
Operating Temperature/ Humidity* ⁴	Temperature: -10 to +50°C Humidity: 10% to 90% RH (0 to +50°C)			Temperature: -10 to +40°C Humidity: 30% to 85% RH	Temp: 0 to +40°C Hum: 30% to 85% RH	
Power Supply	24 VDC (±20%)			3W max.	2.2 W max.	1.2 W max.
Power Consumption	3W max.					
Dimensions	W158×H116×D68 mm (excluding protrusion)* ⁵			W158×H120×D68mm (excluding protrusion)* ⁶		
Weight	Approx. 1.2kg			Approx. 1.3kg		

*1. Specify when purchasing *2. Under the condition of 20 ±2°C *3. Screwless type only *4. No radical temperature or humidity changes and no condensation *5. W127×H116×D68mm for ATEX certified models

*6. W127×H120×D68mm for ATEX certified models

PD-12 SERIES

* Cable gland is not included in ATEX certified models and sold separately.

External Dimensions (mm)**Terminal Block**

*1. When flow drop is detected [Non-contact output (open contact)].

*2. External alarm contact
External trouble alarm contact

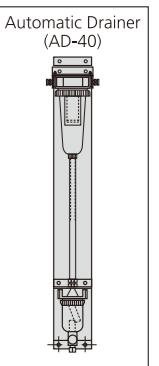
Specifications

Model	PD-12A	PD-12B	PD-12C
Detection Principle	Hot-wire Semiconductor	Catalytic Combustion	Thermal Conduction
Target Gas	Specification Dependant		
Sampling Method	Suction Pump		
Flow Rate	Greater Than 0.5L/min		
Detection Range	Specification Dependant		
Alarm Set Value	Specification Dependant		
Alarm Accuracy	Combustible gas: ±25% of alarm set value Toxic gas: ±30% of alarm set value		
Alarm Response Time	Combustible gas: within 30s at 1.6 times alarm set value Toxic gas: within 60s at 1.6 times alarm set value		
Alarm Indication	Gas alarm: Red LED lamp flashes Trouble alarm: Yellow LED lamp flashes (Sensor trouble, Power voltage malfunction, etc.)		
Output	Gas concentration analog signal •DC4-20mA (common to the negative side of power supply) Gas alarm contact (one stage only) •1a no-voltage contact output, Non-latching •Rated load: 0.5A at 250VAC or 0.5A at 30VDC (resistance load)		
Gas Concentration Display	4-digit digital LED display		
Operation	4 Magnetic Switches		
Explosion Proofing	II 2 G Ex db IIB + H2 T4 Gb (ATEX) Ex db IIB + H2 T4 Gb (IECEx) Ex d IIB + H2 T4 (Japan Ex)		
Protection Level	IP65		
Compatible Cable	Outer Diameter: 11-15mm 6 Core Cable: CVV-S 1.25mm ² or 2.0mm ²		
Operating Temperature/ Humidity	Temperature: -10°C to +50°C Humidity: 10-90%RH (0-50°C)		
Power Supply	DC24V (±20%)		
Power Consumption	7.5W Maximum		
External Dimensions	W133XH289XD132 (Excluding Protrusions)		
Weight	Approx. 5.2kg		
Option	Flow Rate Drop Detection (Alert at less than 0.3L/min)		

*Uses normal alarm contacts. Additional settings required for use as a fault contact.
*ATEX certified. Certain models may not be certified. Please inquire further for details.
*Avoid sudden temperature and humidity changes, as well as condensation.

Standard Accessories

- (1) Magnetic Wand (MJ-1)
- (2) Flow check attachment filter (FC-32)
capable of monitoring the flow rate
- (3) Gas collection nozzle (PF-N3)

**Optional Accessories**

- (4) Protective Cover (PW-41)
Impact and weathering protection
- (5) Automatic Drainer (AD-40)
Removes moisture from the sampling area to prevent harm to the sensor unit.
(Other filters are available for various use cases)