

Gas Detector with cartridge sensor by New Cosmos - BIE

# SH-WAD/CDS series gas detector

**Reliable single to multipoint gas detector**  
**Now available with cartridge sensor**  
For use in cleanrooms and laboratories  
Detecting a large range of semiconductor gases



The SH-WAD/CDS series gas detectors have become the standard safety solution for many production facilities and research centres. They are not only used in cleanrooms, but also very useful in many other hazardous environments. The SH-WAD/CDS gas detectors can be equipped with universal plug-in modules for the provision of additional functions and communication protocols. All units comply with the most stringent quality standards and are extremely reliable. With the integrated self diagnostics functions you are quickly notified on any possible disruption. In-Control Software will provide access to additional information about any changes in the status of the unit. The cartridge sensor fits directly in the SH-WAD/CDS detector. The SH-WAD/CDS detector operates with all cartridge sensors from the models CDS-7, COS-7, CHS-7 and CLS-7 from New Cosmos. The SH-WAD/CDS detector is available as 1, 2 or 4 sensor models with 1, 2 or 4 pumps depending on the application.

### Features and benefits

- SH-WAD series detector developed to fit many application in the semiconductor industry and for research institutes.
- The WAD (Wide Angle Display) allows easy read out of display also in dark areas
- Wide range of configuration possible including voting between sensors and timing function for end point detection applications
- SIL 1 capable
- Easy click fitting sample gas in- and outlets for easy installation
- Optional Relays, ModBus-RTU and Profibus-DP available
- Cartridge sensors reduce maintenance time and do not require maintenance parts, resulting in lower cost of ownership
- The CLS-7 sensor for NF3 now with integrated pyrolizer, a unique feature that reduces maintenance time resulting in lower cost of ownership
- Shorter downtime on sensor change due to cartridge sensor design
- CLS-7 sensors now with longer expected lifetime

### Appearance and part names



Model	Description
SH-1003WAD/CDS	Single detector detecting 1 gas with 1 pump



Model	Description
SH-2001WAD/CDS	Double detector detecting 2 gases with 1 pump
SH-2002WAD/CDS	Double detector detecting 2 gases with 2 pumps



Model	Description
SH-4001WAD/CDS	Quadruple detector detecting 4 gases with 1 pump
SH-4002WAD/CDS	Quadruple detector detecting 4 gases with 2 pumps
SH-4004WAD/CDS	Quadruple detector detecting 4 gases with 4 pumps

### Target gases Cartridge sensors

Model	Target gases
CDS-7	AsH <sub>3</sub> ; B <sub>2</sub> H <sub>6</sub> ; Br <sub>2</sub> ; Cl <sub>2</sub> ; ClF <sub>3</sub> ; CO; COS; DMA; F <sub>2</sub> ; GeH <sub>4</sub> ; H <sub>2</sub> S; H <sub>2</sub> Se; HBr; HCl; HF; Hydride; NH <sub>3</sub> ; NO; NO <sub>2</sub> ; O <sub>3</sub> ; PF <sub>3</sub> ; PH <sub>3</sub> ; Si <sub>2</sub> H <sub>6</sub> ; SiH <sub>2</sub> Cl <sub>2</sub> ; SiH <sub>4</sub> ; SO <sub>2</sub> ; TMAL
COS-7	O <sub>2</sub>
CHS-7F	C <sub>2</sub> H <sub>2</sub> ; C <sub>3</sub> H <sub>8</sub> ; C <sub>6</sub> H <sub>12</sub> ; C <sub>7</sub> H <sub>8</sub> ; C <sub>8</sub> H <sub>18</sub> ; CH <sub>2</sub> Cl <sub>2</sub> ; CH <sub>2</sub> F <sub>2</sub> ; CH <sub>2</sub> O; CH <sub>4</sub> ; CHCl <sub>3</sub> ; CHF <sub>3</sub> ; i-C <sub>4</sub> H <sub>10</sub> ; Gasoline; H <sub>2</sub> ; R134a; TLC;
CHS-7C	C <sub>2</sub> H <sub>2</sub> ; CH <sub>3</sub> OH; CH <sub>4</sub> ; Gasoline; H <sub>2</sub>
CLS-7 series	AsH <sub>3</sub> ; CO; GeH <sub>4</sub> ; NH <sub>3</sub> ; PH <sub>3</sub> ; SiH <sub>4</sub> ; NF <sub>3</sub>

Other gases on request

### Specifications SH-WAD/CDS series detector

Model	SH-1003WAD/CDS	SH-2001WAD/CDS	SH-2002WAD/CDS	SH-4001WAD/CDS	SH-4002WAD/CDS	SH-4004WAD/CDS
Number of gases	1	Max. 2	Max. 2	Max. 4	Max. 4	Max. 4
Number of sample points	1	1	2	1	2	4
Expected service life <sup>(1)</sup>	10 years	10 years	10 years	10 years	10 years	10 years
ModBus-RTU / Profibus-DP / Relays	Optional controllerbox required	Optional	Optional	Optional	Optional	Optional
Power consumption	24Vdc / 14.4W max.	24Vdc / 14.4W max.	24Vdc / 20.0W max.	24Vdc / 14.4W max.	24Vdc / 20.0W max.	24Vdc / 20.0W max.

1) Applicable for detector, excluding sensor and pyrolyzers



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