

RIKEN

TOXIC GAS DETECTOR HEAD for Semiconductor Wafer Fabrication Plants

Model **GD-S8DG** for **TEOS** (Tetraethoxysilane)

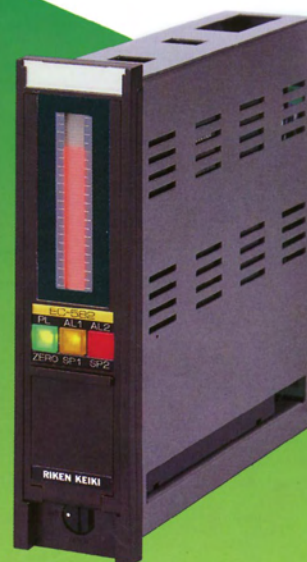
Model **GD-K8DG** for **NF₃** (Nitrogen Trifluoride)

FEATURES

- Ideal for wafer fabrication applications (Clean room and cylinder cabinet)
- Virtually no interference from organic solvents and other gases
- Fast response
- Works with standard Riken indicator/ alarm unit
- Self-diagnosis of pyrolyzer condition
- Low power consumption compared to other pyrolyzer systems
- Long sensor life



Sample drawing type
gas detector head
GD-S8DG or GD-K8DG



Indicator/alarm unit
Model EC-572A or EC-582



RIKEN KEIKI CO.,LTD.

MODEL GD-S8DG/GD-K8DG

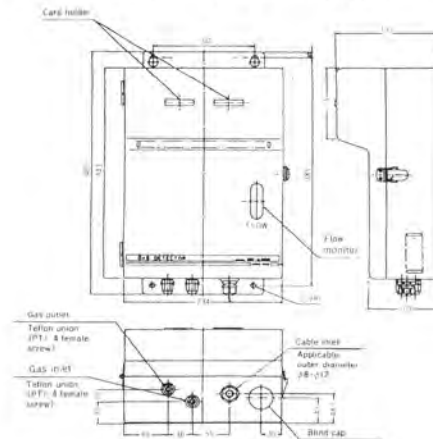
OVERVIEW

The Riken Model GD-S8DG uses pyrolysis to oxidize TEOS (Tetraethoxysilane or tetraethyl orthosilicate). The resulting SiO₂ (Silicon dioxide) is then detected in a dual-ionization chamber. This advanced method offers distinct advantages compared to conventional TEOS detection (Hydrolysis / electrochemical sensor): long sensor life and virtually no interference from other gases.

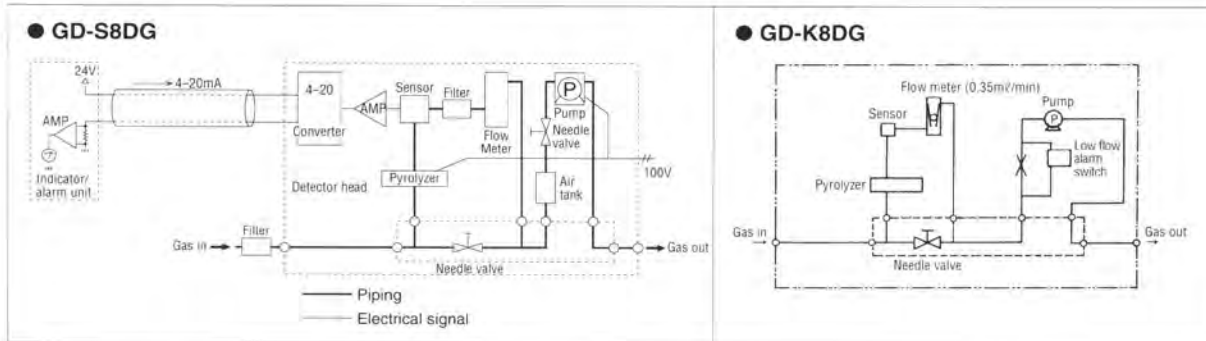
The Model GD-K8DG also uses pyrolysis to oxidize NF₃ (Nitrogen trifluoride), which is then detected as NO₂ with an electrochemical sensor.

Both the GD-S8DG and the GD-K8DG are ideal for use in clean rooms and cylinder cabinets, and can be connected to standard indicator / alarm units or integrated into a variety of monitoring systems.

- GD-S8DG (Sample-drawing type)
- GD-K8DG (Sample-drawing type)



BLOCK DIAGRAM OF GD-S8DG/GD-K8DG



SPECIFICATIONS FOR MODEL GD-S8DG/K8DG

Model	GD-S8DG	GD-K8DG
Detection principle	Pyrolysis/dual ionization chamber	Electrochemical cell
Measurable gas	TEOS (Tetraethoxysilane)	NF ₃ (Nitrogen Trifluoride)
Measuring range	0-15ppm	0-30ppm
Accuracy	Within ±10% (at same condition against the alarm setting value)	Within ±10% of full scale (at same condition against the alarm setting value)
Response time	Within 60 sec when exposed to the calibration gas with 1.6 times the alarm preset point	
Alarm point	10ppm	
Gas sampling method	Sample-drawing type	
Sample flow rate	1.7ℓ/min	500mℓ/min
Signal output	DC4-20mA	
Utility	AC100V ±10% (AC117V, 200V, 220V, and 240V) · 50/60Hz (For pump power supply and pyrolysis)	
Power consumption	Approx. 100VA	
Explosion protected construction	Non-explosion proof	
Wiring requirements	CVVS - 4 cores	
Pipe material	ODΦ6 - 1t (teflon tube)	
Operating condition	10-40°C, 30-80%RH	0-40°C, 30-90%RH
Painting color	2.5Y 9/2 (Cream-colored yellow)	
Weight	Approx. 7.5kg	
Standard accessories	Filter (1 pce) Cap (1 pce) Fuse (1 pce)	Dust filter (1 pce) Interference removal filter (1 pce) Fuse 5A (1 pce)

Specifications subject to change without notice.



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