

TOKA

Fixed Type Gas Alarm

303 series



Combustible Gas Alarm ————— TS-303

Oxygen Gas Alarm ————— TO-303

Toxic Gas Alarm ————— TK-303

Gas alarm for exclusive use of one point

Gas leakage monitor for various types of facility

Drip-proof construction

With dimmer function

The multipoint type is also available by connected installation

TOKA SEIKI CO., LTD.

Design based on new thought.

303 series has become complete by three kinds such as combustible gas, oxygen and toxic gas. This is fixed type gas detector with one detection points. The main body design is standardized and good appearance.

System configuration

Indicating alarm unit 303 series



Wall-mounted type



Flush-mounted type

- Outstanding corrosion resistance and insulation properties (Resin body)
- Drip-proof construction
- With dimmer function
- Extension alarm contact (dry)
- 4 - 20mA Signal output (Option)

Detection unit

For combustible gas

3c



Wall-mounted type

For land DZF-W
For marine DZF-3W

3c



Floor-mounted type

For land DZF-G
For marine DZF-3G

5c



Floor-mounted type

For land DZP
For marine DZP-3
Detection unit for suction type

For oxygen

2c



Wall-mounted type

OC-DX

Detection unit for diffusion type

For toxic gas

2c



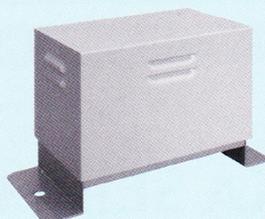
Wall-mounted type

TC-DX

Permitted by Technology Institution of Industry Safety (TIIS certification)
Permitted by Nihon Kaiji Kyokai (NK)
Permitted by The Ship Equipment Inspection of Japan (HK)

※We could provide suction type as well

Drip-proof cover



303 series

It is suitable for the detecting leakage of the combustible gas, oxygen and blackdamp from the gas manufacturer, gas filling facilities, gas consumption utilities, vessel, stockpiling base and so on.

SPECIFICATIONS / 303 SERIES

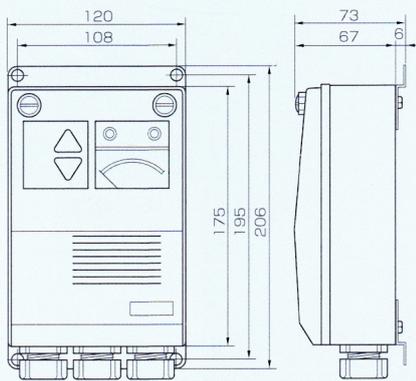
Model	TS-303A	TO-303	TK-303
Measurement Gas	General Combustible Gas (*1)	Oxygen	Toxic Gas (*2)
Principle	Catalytic Combustion	Galvanic Cell	Electro Chemical
Measurement Range	0~100%LEL	0 ~ 25%O ₂	Please refer to table of measurement gas
Accuracy	Within ±5% of full scale	Within ±0.7% O ₂	Within ±5~10% of full scale
Alarm Setting Level	More than 1/10 of full scale	More than 1/10 of full scale	More than 1/10 of full scale
Accuracy of Alarm	Within ±25% of alarm setting level	Within ±25% of alarm setting level	Within ±25% of alarm setting level
Response Speed	Within 30 second response (* 3)	Within 10 second 90% response	Within 30 second response (* 3)
Environmental Condition	-10°C~50°C under 95%RH	0°C~40°C under 95%RH	0°C~40°C under 85%RH
Power	AC100V, 50/60Hz (available for DC12V, DC24V)	AC100V, 50/60Hz (available for DC12V, DC24V)	AC100V, 50/60Hz (available for DC12V, DC24V)
External Alarm Contact	Extension Alarm Contact (dry) 1c	Extension Alarm Contact (dry) 1c	Extension Alarm Contact (dry) 1c
Indicating Lamp	Action Indication : Green	Action Indication : Green	Action Indication : Green
	Alarm Indication : Red	Alarm Indication : Red	Alarm Indication : Red
	Defect Indication : Red	Alarm Indication : Intermittent buzzer	Alarm Indication : Intermittent buzzer
Audible Alarm	Alarm Indication : Intermittent buzzer		
	Defect Indication : Constant tone		
Option	1. Recorder output (0-100mV, 4-20mA etc) 2. Additional meter output (0-500 μA)	3. Two level alarm output (1a or 1b) 4. The second contact point output (1a or 1b)	※ It could not be combined with 1 and 2 or 3 and 4

* 1 A general combustible gas is propane, butane, CNG, LNG, and an ethanol, etc.

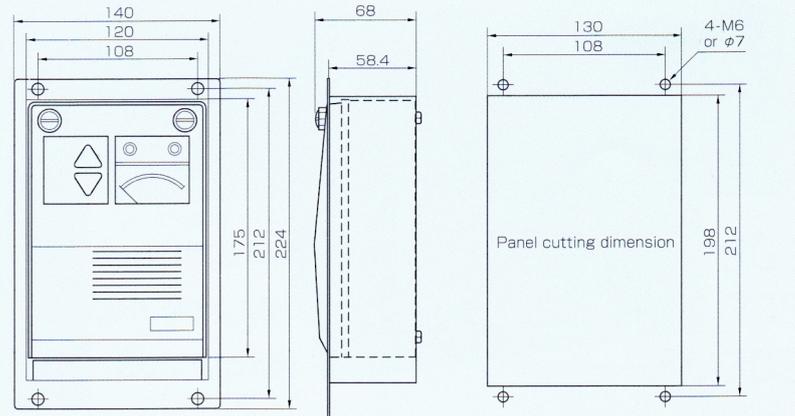
* 2 Please refer to the attached table (gas for detection) for the toxic gas.

* 3 With using gas of 160% density for alarm setting level

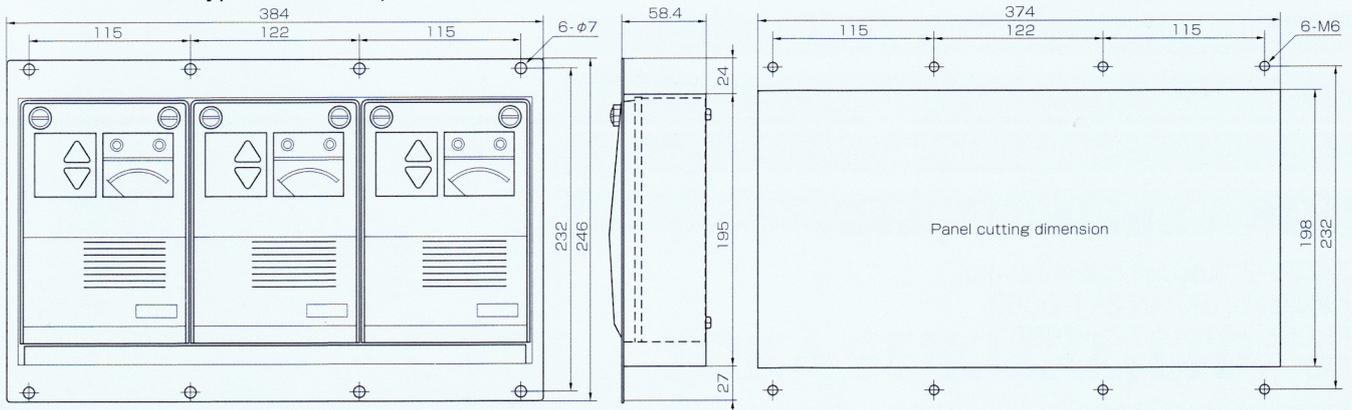
Wall-mounted type



Flush-mounted type



Flush-mounted type with three point combination



SPECIFICATIONS / 5000 SERIES

Model	TU-5000	TO-5000	TK-5000
Measuring gas	Combustible gas	Oxygen	Toxic gas(refer list)
Principle	Catalytic combustion	Galvanic cell	Electro chemical
Measurement Range	0~100%LEL	0~25%O ₂	As refer to attached table
Accuracy	Within ±5% of full-scale	Within ±0.7%O ₂	Within ±5~10% of full-scale
Response speed	Within 30 seconds (*)	Within ten seconds of 90% response level	Within 60 seconds (*)
Alarm setting level	25%LEL It is possible to set it voluntarily by 1/10 or more of full-scale. (AL2 is set. separately)	18%O ₂	As refer to attached table
Alarm accuracy	Within ±25% of alarm setting level (AL2 is set separately)		
External alarm contact	Representative contact (AL1,AL2) : 1c or 1a, AC125V、3A Individual contact : (AL1,AL2) : 1a, AC125V、0.5A		
Alarm indicating	Red LED blinking and intermittent buzzer		
Fault indicating	Red LED lighting and continuous buzzer	None	
Output of recorder	4~20mA (Load resistance 250Ω)		
Operating temperature / humidity limits	-10~50°C below 95%RH	0~40°C below 85%RH	
Power supply	AC100V50/60Hz (Available for AC110V, AC220V, DC12V, and DC24V)		
Installation method	Wall-mounted type		
Dimensions	375(W)×384(H)×110(D)mm (In case of six points type)		

(*) With using gas of 160% density for alarm setting level

Measurement Gas

		TLV (ppm)	Meas. range (ppm)
CO	Carbon Mono-oxid	50	0~150
H ₂ S	Hydrogen	10	0~30
NH ₃	Sulphide	25	0~75
HCl	Ammonia	5	0~15
Cl ₂	Hydrogen Chloride	1	0~3
HF	Chlorine	3	0~9
HCN	Hydrogen Fluoride	10	0~30
PH ₃	Hydrogen Cyanide	0.3	0~1
SO ₂	Phosphine	5	0~15
CH ₃ COOH	Sulphur Dioxide	5	0~15
NO ₂	Acetic Acid	5	0~150
CH ₃ NH ₂	Nitrogen Dioxide	10	0~30
Br ₂	Methylamine	3	0~10
AsH ₃	Bromine	0.3	0~1
F ₂	Arshine	1	0~3
B ₂ H ₆	Fluorine	3	0~10
(CH ₃) ₃ N	Diborane	10	0~30
SiH ₄	Trimethylamine	3	0~10
Si ₂ H ₆	Silane	3	0~10
Si ₃ H ₈	Disilane	3	0~10
BF ₃	Trisilane	3	0~15
BCl ₃	Boron Trifluoride	3	0~15
AsF ₅	Boron Trichloride	3	0~15
O ₂	Arsenic	18%O ₂	0~25%O ₂
General Combustible Gas	Pentafluoride	20	0~100
	Oxygen	%LEL	%LEL

●Emergency DC-AC inverter Specification

Model	TPK-12(V)	TPK-12(W)	TPK-20(V)	TPK-20(W)
Power	AC100V			
Output (normal)	AC100V (Commercial power)			
Output (blackout)	AC100V (Sine-wave)、50Hz(It is possible to specify 60Hz)			
Battery life	About two years			
Hold time	One hour (in case rated loading 60W)		One hour(in case rated loading 200W)	
Operative temperature	-10~40°C			
Installation method	Floor-mounted type	Wall-mounted type	Floor-mounted type	Wall-mounted type
Dimensions (mm)	380(W)×310(H)×169(D)	380(W)×350(H)×175(D)	480(W)×400(H)×212(D)	480(W)×360(H)×204(D)
Weight	About 16kg		About 35kg	



Emergency DC-AC inverter TPK-20W(SI)



5000 series Wall-mounted type TU-5000(W)

※ Specifications are subject to change without any prior notice.

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