

TGas-1031 Series Combustible, Toxic and Harmful Gas Transmitter

Brief introduction

TGas-1031 Series Combustible, Toxic and Harmful Gas Transmitter can continuously measure the concentration of gas on site, and convert the concentration signal into 4-20mA output. It is extensively applied in petroleum, petrochemistry, chemical industry, gas, coal, metallurgy and electric power; safety detection in municipal administration, telecommunication and traffic tunnel construction; the place where combustible, poisonous and harmful gas might leak, such as gasholder station and special industrial factory building, etc.

Main features

- ◆ Two kinds of optional mode of power supply, including centralized busbar type and independent area type
- ◆ High and low concentration alarm, performing real-time monitor to gas
- ◆ Anti-poisoning type gas sensor with high sensitivity
- ◆ Automatic modification of ageing curve of sensor, keeping constant alarm sensitivity
- ◆ Function of automatic recognition of sensor trouble, function of high concentration gas above-norm of sensor
- ◆ Function of automatic detection at starting up, and it has advanced function of self-diagnosis and self-repairing.
- ◆ The calibrated concentration value is adjustable, facilitating users to set by themselves
- ◆ When the sensor loses the function of monitoring alarm because of ageing, the detector is capable of automatic recognition and alarm, so as to effectively avoid missing report



Technical parameters

Parameters	Characteristics
Detectable gas	Combustible vapour of liquids, including methane, LPG, coal gas and gasoline, etc., As well as poisonous and harmful gas
Measurement precision	±5%F.S
Repeatability	2%
Measurement range	Refer to lectotype table for details
Drift	Zero drift: ±2%F.S
	Range drift: ±5%F.S
Response time	< 30s (T90)
Sampling method	Diffusion
Working environment	Temperature: -30°C60°C; humidity: below 85% (no coagulation)

Remote control mode	By the adjustment mode by infrared remote control, the detector can be adjusted without opening of cover
4-20mA output	4-20mA output corresponding to 0-100%, maximum load 800 Ω
Alarm output	The effective alarm is 1 point or 2 points; each alarm shall use SPDT electronic relay. Contact rating of alarm relay: Ohmic load: 5A@24Vdc or 120Vac or 240Vac Inductive load: 50VA
Communication	Communication description: two-wire system parallel RS485 protocol, 32 points at most Connection: Twisted pair with shield Distance: maximum 1000m
Input voltage	24VDC \pm 25%; power: 2W/way
Certificate	Explosion-proof grade: ExdIICT5 Protection class: IP66
Using cable	\geq 2.5mm $2\times$ 4 Screened cable line, outside diameter of cable is required to be between 6mm- 9mm

Lectotype table for detected gas (part gas)

Model	Range	Low alarm setting range	High alarm setting range	Low alarm point	High alarm point
TGas-1031-FL	0-100%LEL	10%LEL-5%LEL	25%LEL-80%LEL	20%LEL	50%LEL
TGas-1031-CO	0-500ppm	25ppm-100ppm	100ppm-500ppm	35ppm	200ppm
TGas-1031-CO	0-1000ppm	25ppm-100ppm	100ppm-500ppm	35ppm	200ppm
TGas-1031-H ₂ S	0-100ppm	5ppm-15ppm	15ppm-30ppm	10ppm	15ppm
TGas-1031-SO ₂	0-100ppm	1ppm-3ppm	3ppm-10ppm	2ppm	5ppm
TGas-1031-Cl ₂	0-20ppm	3ppm-10ppm	5ppm-15ppm	5ppm	10ppm
TGas-1031-NH ₃	0-100ppm	20ppm-30ppm	30ppm-70ppm	25ppm	50ppm
TGas-1031-NO	0-250ppm	20ppm-50ppm	50ppm-100ppm	25ppm	50ppm
TGas-1031-NO ₂	0-100ppm	1ppm-2ppm	2ppm-5ppm	1ppm	2ppm
TGas-1031-HCN	0-30ppm	5ppm-10ppm	10ppm-15ppm	5ppm	10ppm
TGas-1031-PH ₃	0-1ppm	0.3ppm-0.5ppm	0.5ppm-0.8ppm	0.3ppm	0.6ppm

*TGas-1031-O₂ 0-30%vol 16%-19.5% 22.5-24%vol 19.5%vol 23.5%vol
 TGas-1031-CO₂ 0-5%vol
 TGas-1031-Cl₂ 0-10ppm

Executed standards.(GB Standard is China National Standard)

GB12358-2006 Gas monitors and alarms for workplace General technical requirements

GB3836.1-2000 Electrical apparatus for explosive gas atmospheres Part 1 General requirements

GB3836.4-2000 Electrical apparatus for explosive gas atmospheres Part 4 intrinsic safety "i"

Explosion-proof mark: ExiaIICT3, it applies to 0 zone, 1 zone and 2 zone, the place that contains IIA-IIC category and T1-T3 group of explosive gas mixture, and is qualified to get explosion-proof conformity certificate through inspection by CQST.