

GRD-2000

Thermal Conductivity Gas Analyzer



Product Overview

The GRD-2000 Thermal Conductivity Gas Analyzer is designed to continuously measure the concentration of a single component of interest in a flowing gas mixture. The measurement is based on the different thermal conductivity of the individual components of the sample stream. It compares the thermal conductivity of a sample stream with that of a reference gas of known composition.

The microprocessor-based GRD-2000 adopts thermal conductivity gas sensor with high stability and strong reliability, which features large LCD display, upper and lower limit alarm, standard signal output and relay contact alarm output. The instrument can be used in a wide variety of industrial applications where it is necessary to measure the concentration of one component of gas mixture.

Product Features

- High stability and strong reliability
- High sensitivity and fast response
- Large LCD display
- Upper and lower alarm values freely settable
- Automatic data storage and viewable at any time
- Compensation for interference from CO, CO₂ and CH₄
- Online calibration

| Gas | Measurement Range | Gas Matrix |
|-----------------|----------------------------|-------------------------------------|
| H ₂ | 0~100% (full scale) | N ₂ , Ar, O ₂ |
| Ar | 0~15%, 80~100% | Air, N ₂ |
| CO ₂ | 0~10%, 0~15%, 0~20%, 0~30% | Air, Ar |
| SO ₂ | 0~15% | |



Technical Data

Specifications

Repeatability: $\leq 0.75\%$ F.S.
 Linearity: $\leq \pm 1.5\%$ F.S.
 Zero drift: $\leq \pm 1.5\%/7d$
 Span drift: $\leq \pm 1.5\%/7d$
 Response time: $\leq 40s(T90)$
 Sample gas pressure: $\leq 0.2MPa$
 Sample gas temperature: $0\sim 50^{\circ}C$
 Sample gas flow: 200mL/min

Output

4~20mA DC (Max. load $<800\Omega$)
 0~10mA DC (Max. load $<1600\Omega$)
 RS232

Operating conditions

Relay contact rating: 220VAC/1A
 Power consumption: $<60W$
 Power supply: $220V \pm 22V$ AC, 50Hz ± 1 Hz
 Housing: 19" rack unit
 Probe hole: 443+1 \times 133+1mm
 Ambient temperature: $0^{\circ}C \sim 40^{\circ}C$
 Relative humidity: 20%~80%
 Solar radiation: avoid direct sunlight
 Ambient dust: negligible
 Gas flow rate: 0.5m/s
 Ventilation: well-ventilated
 Operating position: horizontal installation (± 10)
 Environment: no corrosion, no severe vibration and electromagnetic interference.

GRD-3000B

Explosion-proof Hydrogen Analyzer



Product Overview

The GRD-3000 Explosion-proof Hydrogen Analyzer is designed to continuously measure the concentration of a single component of interest in a flowing gas mixture. The measurement is based on the different thermal conductivity of the individual components of the sample stream. It compares the thermal conductivity of a sample stream with that of a reference gas of known composition.

The microprocessor-based GRD-3000 Explosion-proof Hydrogen Analyzer adopts thermal conductivity gas sensor with high performance, which features strong anti-interference capacity, high resolution and fast response, digital display, upper and lower alarm, standard signal output and relay contact alarm output. The analyzer consists of electronic control and thermal conductivity sensor, which is supplied in an explosion-proof enclosure suitable for installation in hazardous areas.

Product Features

- Explosion-proof enclosure suitable for hazardous areas
- High stability and strong reliability
- High sensitivity and fast response
- Large LCD display
- Upper and lower alarm values freely settable
- Automatic data storage and viewable at any time
- Online calibration



Gas Measurement Range

| Gas | Measurement Range |
|----------------|---|
| H ₂ | 0~2%, 0~10%, 20~70%, 35~75%, 50~80%, 95~100% (volume) |

Technical Data

Specification

Repeatability: 1%F.S.
 Linearity: $\pm 2.5\%$ F.S.
 Stability error: $\leq 1\%/24h$
 Response time: $\leq 40s$ (T90)
 Sample gas flow: 200mL/min

Output

4~20mA DC (Max. load<800 Ω)
 0~10mA DC (Max. load<1600 Ω)
 RS232

Operating Conditions

Power consumption: 60W
 Power supply: 220V $\pm 10\%$ AC, 50Hz $\pm 5\%$
 Ambient temperature: -15~50 $^{\circ}$ C
 Ambient humidity: 5~90%RH, 50 $^{\circ}$ C
 Explosion-proof grade: Exdib II CT6
 Controller external dimensions(L x W x H): 260 x 180 x 120mm
 Mounting rack: 310 x 80mm
 Detector external dimensions: 355 x 411mm