

# GACV-5 Calorific Value Analyzer



# GACV-5 Calorific Value Analyzer

## Instrument Functions

Based on infrared gas absorption analysis method, GACV-5 calorific value analyzer adopts intelligent digital processing technology to realize the analysis process of gas concentration value and calorific value in gas. It has the characteristics of high degree of automation, strong function, easy operation and digital communication.



## Main Functions

- ◆ Accurate measurement of CO, CO<sub>2</sub>, O<sub>2</sub> and H<sub>2</sub> gas concentration and calorific value
- ◆ Color LCD screen display, display information clearly.
- ◆ Touch screen operation, easy to operate.
- ◆ 4-20mA current loop output.
- ◆ 8-way switch quantity (relay) output.
- ◆ RS232 communication, easy to expand to RS485.

## Technical Indicators

- Typical Range: CO 0-100%, CO<sub>2</sub> 0-50%, O<sub>2</sub> 0-25%, H<sub>2</sub> 0-10%
- Working Environment Temperature: (5-45)°C
- Linearity Deviation: ±2%FS
- Stability: ±2%FS/7d
- Repeatability: 1%
- Response Time (T<sub>90</sub>): ≤25s
- Ambient Temperature Influence: ±2%FS (5-45)°C

## Working Principle

Spectral absorption method shows that many gas molecules have characteristic absorption in the infrared band. According to the Lambert-Beer law, the characteristic absorption intensity is proportional to the gas concentration. The GACV-5 calorific value analyzer adopts this principle and belongs to the NDIR (non-spectroscopy) infrared gas analyzer. The GACV-5 calorific value analyzer adopts the mature and reliable analysis method in the field of gas analysis, and selects the international advanced MEMS infrared light source and dual-channel infrared detector.

GACV-5 calorific value analyzer analyzes and measures CO and CO by NDIR method, analyzes H<sub>2</sub> concentration by thermal conductivity method, analyzes O<sub>2</sub> concentration by electrochemical method, and then calculates the calorific value according to the gas calorific value coefficient.

# GACV-5 Calorific Value Analyzer

## Technical Advantages

- ◆ NDIR measurement method, easy to use, replaces the combustion method calorific value meter.
- ◆ The design of the dual-channel detector effectively improves the stability of the instrument.
- ◆ Eliminate the influence of CO<sub>2</sub> on H<sub>2</sub> interference through dynamic compensation.
- ◆ The isolated current loop output and switch output can eliminate the influence of various external disturbances on the instrument measurement.

## Typical Engineering Applications

- ◆ Analysis of blast furnace top gas composition in metallurgical industry
- ◆ Composition and calorific value measurement of industrial gas in the field of coal gasification

### **Brix Engineering Pte Ltd**

190, Middle Road, #16-01, Fortune Centre,  
Singapore - 188979.  
sales@brixengg.com | www.brixengg.com  
M: +65 9446 2236