

DGA.1000

Product Overview

Transformer oil gas chromatograph is suitable for determining the content of dissolved gases in the insulating oil. Content of the dissolved gas components in the insulating oil can be determined by one injection. The minimum detection concentration of acetylene is 0.1ppm. The instrument is equipped with large-screen LCD interface with easy to operate menu's.

CO₂, CH₄, C₂H₂, C₂H₄, C₂H₆ can be analysed by one-time injection. The instrument is equipped with two-column parallel shunt system, thermal conductivity detector, dual hydrogen flame detector and nickel catalyst reforming furnace.

Polychlorinated biphenyls (PCBs) model available

Operation standard

GB/T 17623-1998 《Gas-chromatographic determination of dissolved gas content in insulating oils》, GB/T 7252-2001 《Guidelines for Analysis and Judgment of Dissolved Gases in Transformer Oils》, DL/T 722-2000 《Guidelines for Analysis and Judgment of Dissolved Gases in Transformer Oils》



Key Features:

- Transformer oil gas chromatography is a cost-effective, multi-functional, economical, practical and accurate instruments. The instrument uses a three-column, three-gas operating system and is equipped with a dual-flame ionization detector (FID), a thermal conductivity detector (TCD) and a methane reformer system.
- Transformer oil gas chromatography using micro-computer and integrated circuit control.
- The instrument has power-down protection, file storage and file transfer function.
- Instrument detector and its control components using plug and play control mode's for easy operation.
- The instrument can be operated at a constant temperature and programmed temperature. The column chamber is equipped with a flexible rear door opening and automatic temperature control system.
- Temperature control's have a high level of precision, heating and cooling speed is swift which assist in timeous processing.
- Pneumatic process is flexible, reliable, and easy to expand, making it suitable for a wide range of inspection and sample combinations.
- The detector can be equipped with a variety of detector options (TCD, FID, ECD, FPD and NPD), which can be configured according to the needs of user analysis. The instrument can be installed with up to four kinds of detectors at the same time.
- The injection system of the instrument can be equipped with a variety of sampling devices such as packed column head injection, glass-lined quick injection, capillary column split / spitless injection with membrane cleaning function.
- The instrument's signal output can be connected to a variety of peripheral data processing equipment or drawing equipment including chromatographic data processors and chromatography workstations etc.
- The instrument has a carrier gas circuit gas protection. It can effectively protect the column and the thermal components from damage in TCD operation. Pre-set spare temperature control port, easy to expand.
- The instrument has over-temperature protection, any channel temperature control over the protection temperature, the instrument will sound an alarm and automatically power down.

Dissolved gas analysis (uL / L)

H₂	CO	CO₂	CH₄	C₂H₄	C₂H₆	C₂H₂
2	2	2	0.1	0.1	0.1	0.1

- Qualitative repeatability: deviation \leq 1%
- Quantitative repeatability: deviation \leq 3%

temperature control	4 - 450 degrees above room temperature
Temperature control accuracy of cylindrical box	±0.01°C
Display accuracy	0.1°C
Lift rate of cylindrical box	16 steps temperature programmed, 0-40 /min (adjusted increment 0.1 /min)
Programmed temperature repeatability	≤1%
Sensitivity of TCD detector	S≥3500mV•ml/mg(benzene)
Baseline drift	≤25uv/30min
Baseline noise	≤10uv
Linear range	≥104
FID detector detection limit	≤3×10 ⁻¹² g/s (Positive sixteen alkane)
Baseline drift	≤1×10 ⁻¹³ A/30min
Baseline noise	≤5×10 ⁻¹⁴ A
Linear range	≥104
Expansion	6 external events can be added
Automation engineering	Automatic ignition function, can be used to workstation control

Instrument performance characteristics

- 5.7-inch large-screen LCD display, temperature of each channel operating conditions with real-time display, clear and intuitive.
- Self-test, with self-diagnostic function, can accurately determine the fault location and alarm.
- 6 channels independent temperature control (vaporization chamber, capillary vaporization chamber can independently control temperature), eight-stage program temperature rise function.
- Over-temperature protection: any channel over the settled temperature, the instrument will automatically power off and alarm shall sound.
- The unique vertical heating device, make's the sample vaporization more reliable, and reduces the heat radiation generated by the vaporization chamber to a minimum, to ensure that the temperature deviation within the column is minimal.
- Intelligent control to open the door system, automatically track the temperature and dynamic adjustment of the damper angle, even near room temperature can also be achieved with precise temperature control.
- Equipped with column-head injection, glass-lined injection, diaphragm cleaning, functional capillary split / spitless injection device, and can be installed gas sampler.
- High-precision dual-stable gas path, which can install four detectors at the same time.

Standard Accessories:

- 1 X Host (Nickel catalyst conversion furnace + packed column vaporization chamber + thermal conductivity detector + dual hydrogen flame detector)
- 2 X Chromatography Column for transformer oil
- 1 X Automatic degassing oscillator
- 1 X Transformer oil dedicated chromatography workstation
- 1 X Air generator
- 1 X Hydrogen generator
- 1 X High purity nitrogen cylinder / Bottle
- 1 X Standard gas bottle
- 1 X PC and printer