

## PORTABLE GAS ANALYZER

### A COMPACT RUGGED & INTELLIGENT INSTRUMENT FOR ANALYSIS OF PROCESS GASES IN BIOGAS PLANTS CH<sub>4</sub>, CO<sub>2</sub>, H<sub>2</sub>S & O<sub>2</sub>



## TGAP 7001

### TABLETOP BINARY GAS ANALYZER

TGAP 7001 is a rugged, portable, easy-to-use gas analyzer that monitors purge gases and the cooling gas in hydrogen-cooled turbine generators.

It measures hydrogen in air & hydrogen in CO<sub>2</sub> as well as CO<sub>2</sub> in air during maintenance purging of hydrogen rooted turbine generators.

Switch selectable ranges on the instrument make it easy to choose the measurement required.

To minimize downtime, it is important for the 2 step purge process to proceed quickly and effectively. The TGAP 7001 helps achieve those objectives. During the first stage of maintenance purging, the unit monitors the changing H<sub>2</sub>/CO<sub>2</sub> mixture. This allows operators to know the earliest moment to begin the second stage (air purge). This also saves money by minimizing CO<sub>2</sub> usage. During the second stage, the TGAP 7001 monitors air in CO<sub>2</sub>, which helps you decide when workers can begin maintenance.

## APPLICATIONS

- Before workers can perform periodic maintenance inside a hydrogen-cooled turbine generator, the hydrogen (H<sub>2</sub>) cooling gas must be purged and replaced with a breathable atmosphere (air). However, Air/H<sub>2</sub> mixtures are potentially explosive, so maintenance purge is used that proceeds in two stages. First, carbon dioxide (CO<sub>2</sub>) is used to purge out the H<sub>2</sub>. Then, in the second stage, air purges out the CO<sub>2</sub>.
- Spot check hydrogen purity during normal generator operation.

## BENEFITS

- No installation required
- Minimizes costly maintenance downtime
- Saves money by avoiding needless waste of CO<sub>2</sub> purge gas
- Assures optimum efficiency by detecting air contamination

## SPECIAL FEATURES

- Portable, rugged, lightweight
- Sealed reference cell, no need for a flowing reference support gas
- Uses no consumables and is virtually maintenance free
- Proven thermal conductivity detector
- Switch-selectable gas for easy choice of desired measurement
- Large, easy to read readout for observing rate of change (trending) of purge gas mixtures

## SPECIFICATIONS

Type	: Portable
Detectable gases / parameters	: H <sub>2</sub> , O <sub>2</sub> , CO <sub>2</sub> (Binary gaseous mixture)
Electronics / processor	: Micro-controller
Power supply	: Rechargeable battery & 230 V AC
Display	: Graphical LCD
Output	: RS 232
Technology	: TCD
Resolution	: 0.1% H <sub>2</sub> , Air and CO <sub>2</sub>
Accuracy	: ± 2 % FS
Response time	: Less than 10 sec
Operating temperature	: 0 - 55 °C
Sampling / input	: Inbuilt pump
Housing / case	: Plastic
Included accessories	: Battery charger, flow meter, leather carry case Datalogger, Sampling pump
Optional accessories	: Integral printer, Air filter
Range	: A) 0 - 100 % H <sub>2</sub> in air B) 0 - 100 % CO <sub>2</sub> in air C) 0 - 100 % H <sub>2</sub> in Co <sub>2</sub>
Drift Rate	: Less than 1% (range)
Flow Rate	: 0.1 ~ 0.5 lpm (0.5 - 30 psig)
Wetted Parts	: Brass, SS, Aluminum, Teflon, Nylon
Gas Connections	: 1/4" Tube
Enclosure	: NEMA - 4 x PET Plastic Housing

*Note : Images shown are indicative only. Specifications and Features will vary with application. There may be changes overtime due to continuous development process.*  
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